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REPORT
OF THE
UNITED NATIONS
CONFERENCE
ON THE
HUMAN ENVIRONMENT

Stockholm, 5-16 June 1972

UNITED NATIONS

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Stockholm, 5-16 June 1972

UNITED NATIONS
New York, 1973

NOTE

Symbols of United Nations documents are composed of capital letters combined with figures. Mention of such a symbol indicates a reference to a United Nations document.

* * *

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CONTENTS

Page

Abbreviations v

PART ONE

Action taken by the Conference

Chapter

I. DECLARATION OF THE UNITED NATIONS CONFERENCE ON THE HUMAN ENVIRONMENT 3

II. ACTION PLAN FOR THE HUMAN ENVIRONMENT 6
A. Framework for environmental action 6
B. Recommendations for action at the international level 6
C. The Action Plan 27

III. RESOLUTION ON INSTITUTIONAL AND FINANCIAL ARRANGEMENTS 29

IV. OTHER RESOLUTIONS ADOPTED BY THE CONFERENCE 32
World Environment Day 32
Nuclear weapons tests 32
Convening of a second United Nations Conference on the Human Environment 32
Expression of thanks 33

V. REFERRAL TO GOVERNMENTS OF RECOMMENDATIONS FOR ACTION AT THE NATIONAL LEVEL 34

PART TWO

Background

VI. CONSTITUTION OF THE CONFERENCE 37

PART THREE

Proceedings of the Conference

VII. ATTENDANCE AND ORGANIZATION OF WORK 43
A. Participants 43
B. Opening of the Conference 43
C. Election of the President 43
D. Rules of procedure 43
E. Election of officers other than the President 43
F. Adoption of the agenda 44
G. Constitution of subsidiary bodies 44

VIII. BRIEF SUMMARY OF THE GENERAL DEBATE 45

IX. ESTABLISHMENT OF THE WORKING GROUP ON THE DECLARATION ON THE HUMAN ENVIRONMENT . . 49

X. ACTION ON REPORTS OF COMMITTEES AND OF THE WORKING GROUP 51
A. First Committee 51
B. Second Committee 55
C. Third Committee 59
D. Working Group on the Declaration on the Human Environment 63
E. Credentials Committee 66

XI. ADOPTION OF THE ACTION PLAN FOR THE HUMAN ENVIRONMENT 67

XII. ADOPTION OF THE REPORT OF THE CONFERENCE 68

ANNEXES

		Page
I.	Report of the Credentials Committee	69
II.	Report of the Working Group on the Declaration on the Human Environment	70
III.	General principles for assessment and control of marine pollution	73
IV.	List of documents before the Conference	75
V.	Table showing the correspondence between the numbers of the recommendations as they appear in the report and the numbers of the recommendations as adopted by the Conference	76

ABBREVIATIONS

used in the report of the Conference and in official Conference documents

ACC	Administrative Committee on Co-ordination (United Nations)
ACMRR	Advisory Committee on Marine Resources Research
ACOMR	Advisory Committee on Oceanic Meteorological Research
CIAP	Interamerican Committee of the Alliance for Progress
ECA	Economic Commission for Africa (United Nations)
ECAFE	Economic Commission for Asia and the Far East (United Nations)
ECE	Economic Commission for Europe (United Nations)
ECLA	Economic Commission for Latin America (United Nations)
ENEA	European Nuclear Energy Agency
FAO	Food and Agriculture Organization of the United Nations
GARP	Global Atmospheric Research Programme
GATT	General Agreement on Tariffs and Trade
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Pollution (IMCO/FAO/UNESCO/WMO WHO/IAEA/UN)
GIPME	Global Investigation of Pollution in the Marine Environment
IAEA	International Atomic Energy Agency
IAMAP	International Association of Meteorology and Atmospheric Physics
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBP	International Biological Programme
IBRD	International Bank for Reconstruction and Development
ICAO	International Civil Aviation Organization
ICC	International Computing Centre
ICE	International Centre for the Environment
ICES	International Council for the Exploration of the Sea
ICSPRO	Inter-Secretariat Committee on Scientific Problems Relating to Oceanography
ICSU	International Council of Scientific Unions
IGOSS	Integrated Global Ocean Station System
IHD	International Hydrological Decade
ILO	International Labour Organisation
IMCO	Intergovernmental Maritime Consultative Organization
IOC	Intergovernmental Oceanographic Commission
ISSS	International Society of Soil Science
ITU	International Telecommunication Union
IUCN	International Union for Conservation of Nature and Natural Resources
IUFRO	International Union of Forestry Research Organization
IVIC	Institute of Scientific Research, Caracas
IWG	Intergovernmental Working Group
IWP	Indicative World Plan
LEPOR	Long-term and Expanded Programme of Oceanic Exploration and Research

MAB	Man and the Biosphere Programme (UNESCO)
OECD	Organisation for Economic Co-operation and Development
SCOPE	Scientific Committee on Problems of the Environment
SCOR	Scientific Committee on Ocean Research
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNESOB	United Nations Economic and Social Office in Beirut
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UNISIST	World Science Information System
UNITAR	United Nations Institute for Training and Research
UNRWA	United Nations Relief and Works Agency for Palestine Refugees
UNSCEAR	United Nations Scientific Committee on the Effects of Atomic Radiation
WEI	World Environment Institute
WFP	World Food Programme
WHO	World Health Organization
WMO	World Meteorological Organization
WWW	World Weather Watch

Part one

ACTION TAKEN BY THE CONFERENCE

Chapter I

DECLARATION OF THE UNITED NATIONS CONFERENCE ON THE HUMAN ENVIRONMENT

The United Nations Conference on the Human Environment,

Having met at Stockholm from 5 to 16 June 1972,

Having considered the need for a common outlook and for common principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment,

I

Proclaims that:

1. Man is both creature and moulder of his environment, which gives him physical sustenance and affords him the opportunity for intellectual, moral, social and spiritual growth. In the long and tortuous evolution of the human race on this planet a stage has been reached when, through the rapid acceleration of science and technology, man has acquired the power to transform his environment in countless ways and on an unprecedented scale. Both aspects of man's environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights—even the right to life itself.

2. The protection and improvement of the human environment is a major issue which affects the well-being of peoples and economic development throughout the world; it is the urgent desire of the peoples of the whole world and the duty of all Governments.

3. Man has constantly to sum up experience and go on discovering, inventing, creating and advancing. In our time, man's capability to transform his surroundings, if used wisely, can bring to all peoples the benefits of development and the opportunity to enhance the quality of life. Wrongly or heedlessly applied, the same power can do incalculable harm to human beings and the human environment. We see around us growing evidence of man-made harm in many regions of the earth: dangerous levels of pollution in water, air, earth and living beings; major and undesirable disturbances to the ecological balance of the biosphere; destruction and depletion of irreplaceable resources; and gross deficiences, harmful to the physical, mental and social health of man, in the man-made environment, particularly in the living and working environment.

4. In the developing countries most of the environmental problems are caused by under-development. Millions continue to live far below the minimum levels required for a decent human existence, deprived of adequate food and clothing, shelter and education, health and sanitation. Therefore, the developing countries must direct their efforts to development, bearing in mind their priorities and the need to safeguard and improve the environment. For the same purpose, the industrialized countries should make efforts to reduce the gap themselves and the developing countries. In the industrialized countries, environmental problems are generally related to industrialization and technological development.

5. The natural growth of population continuously presents problems for the preservation of the environment, and adequate policies and measures should be adopted, as appropriate, to face these problems. Of all things in the world, people are the most precious. It is the people that propel social progress, create social wealth, develop science and technology and, through their hard work, continuously transform the human environment. Along with social progress and the advance of production, science and technology, the capability of man to improve the environment increases with each passing day.

6. A point has been reached in history when we must shape our actions throughout the world with a more prudent care for their environmental consequences. Through ignorance or indifference we can do massive and irreversible harm to the earthly environment on which our life and well-being depend. Conversely, through fuller knowledge and wiser action, we can achieve for ourselves and our posterity a better life in an environment more in keeping with human needs and hopes. There are broad vistas for the enhancement of environmental quality and the creation of a good life. What is needed is an enthusiastic but calm state of mind and intense but orderly work. For the purpose of attaining freedom in the world of nature, man must use knowledge to build, in collaboration with nature, a better environment. To defend and improve the human environment for present and future generations has become an imperative goal for mankind—a goal to be pursued together with, and in harmony with, the established and fundamental goals of peace and of world-wide economic and social development.

7. To achieve this environmental goal will demand the acceptance of responsibility by citizens and communities and by enterprises and institutions at every level, all sharing equitably in common efforts. Individuals in all walks of life as well as organizations in many fields, by their values and the sum of their actions, will shape the world environment of the future. Local and national governments will bear the greatest burden for

large-scale environmental policy and action within their jurisdictions. International co-operation is also needed in order to raise resources to support the developing countries in carrying out their responsibilities in this field. A growing class of environmental problems, because they are regional or global in extent or because they affect the common international realm, will require extensive co-operation among nations and action by international organizations in the common interest. The Conference calls upon Governments and peoples to exert common efforts for the preservation and improvement of the human environment, for the benefit of all the people and for their posterity.

II

Principles

States the common conviction that:

Principle 1

Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations. In this respect, policies promoting or perpetuating *apartheid*, racial segregation, discrimination, colonial and other forms of oppression and foreign domination stand condemned and must be eliminated.

Principle 2

The natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate.

Principle 3

The capacity of the earth to produce vital renewable resources must be maintained and, wherever practicable, restored or improved.

Principle 4

Man has a special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat, which are now gravely imperilled by a combination of adverse factors. Nature conservation, including wildlife, must therefore receive importance in planning for economic development.

Principle 5

The non-renewable resources of the earth must be employed in such a way as to guard against the danger of their future exhaustion and to ensure that benefits from such employment are shared by all mankind.

Principle 6

The discharge of toxic substances or of other substances and the release of heat, in such quantities or concentrations as to exceed the capacity of the environment to render them harmless, must be halted in order to ensure that serious or irreversible damage is not inflicted upon ecosystems. The just struggle of the peoples of all countries against pollution should be supported.

Principle 7

States shall take all possible steps to prevent pollution of the seas by substances that are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea.

Principle 8

Economic and social development is essential for ensuring a favourable living and working environment for man and for creating conditions on earth that are necessary for the improvement of the quality of life.

Principle 9

Environmental deficiencies generated by the conditions of under-development and natural disastersp ose grave problems and can best be remedied by accelerated development through the transfer of substantial quantities of financial and technological assistance as a supplement to the domestic effort of the developing countries and such timely assistance as may be required.

Principle 10

For the developing countries, stability of prices and adequate earnings for primary commodities and raw materials are essential to environmental management since economic factors as well as ecological processes must be taken into account.

Principle 11

The environmental policies of all States should enhance and not adversely affect the present or future development potential of developing countries, nor should they hamper the attainment of better living conditions for all, and appropriate steps should be taken by States and international organizations with a view to reaching agreement on meeting the possible national and international economic consequences resulting from the application of environmental measures.

Principle 12

Resources should be made available to preserve and improve the environment, taking into account the circumstances and particular requirements of developing countries and any costs which may emanate from their incorporating environmental safeguards into their development planning and the need for making available to them, upon their request, additional international technical and financial assistance for this purpose.

Principle 13

In order to achieve a more rational management of resources and thus to improve the environment, States should adopt an integrated and co-ordinated approach to their development planning so as to ensure that development is compatible with the need to protect and improve environment for the benefit of their population.

Principle 14

Rational planning constitutes an essential tool for reconciling any conflict between the needs of development and the need to protect and improve the environment.

Principle 15

Planning must be applied to human settlements and urbanization with a view to avoiding adverse effects on the environment and obtaining maximum social, economic and environmental benefits for all. In this respect, projects which are designed for colonialist and racist domination must be abandoned.

Principle 16

Demographic policies which are without prejudice to basic human rights and which are deemed appropriate by Governments concerned should be applied in those regions where the rate of population growth or excessive population concentrations are likely to have adverse effects on the environment of the human environment and impede development.

Principle 17

Appropriate national institutions must be entrusted with the task of planning, managing or controlling the environmental resources of States with a view to enhancing environmental quality.

Principle 18

Science and technology, as part of their contribution to economic and social development, must be applied to the identification, avoidance and control of environmental risks and the solution of environmental problems and for the common good of mankind.

Principle 19

Education in environmental matters, for the younger generation as well as adults, giving due consideration to the underprivileged, is essential in order to broaden the basis for an enlightened opinion and responsible conduct by individuals, enterprises and communities in protecting and improving the environment in its full human dimension. It is also essential that mass media of communications avoid contributing to the deterioration of the environment, but, on the contrary, disseminate information of an educational nature on the need to protect and improve the environment in order to enable man to develop in every respect.

Principle 20

Scientific research and development in the context of environmental problems, both national and multinational, must be promoted in all countries, especially the developing countries. In this connexion, the free flow of up-to-date scientific information and transfer of experience must be supported and assisted, to facilitate the solution of environmental problems; environmental technologies should be made available to developing countries on terms which would encourage their wide dissemination without constituting an economic burden on the developing countries.

Principle 21

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

Principle 22

States shall co-operate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction.

Principle 23

Without prejudice to such criteria as may be agreed upon by the international community, or to standards which will have to be determined nationally, it will be essential in all cases to consider the systems of values prevailing in each country, and the extent of the applicability of standards which are valid for the most advanced countries but which may be inappropriate and of unwarranted social cost for the developing countries.

Principle 24

International matters concerning the protection and improvement of the environment should be handled in a co-operative spirit by all countries, big and small, on an equal footing. Co-operation through multilateral or bilateral arrangements or other appropriate means is essential to effectively control, prevent, reduce and eliminate adverse environmental effects resulting from activities conducted in all spheres, in such a way that due account is taken of the sovereignty and interests of all States.

Principle 25

States shall ensure that international organizations play a co-ordinated, efficient and dynamic role for the protection and improvement of the environment.

Principle 26

Man and his environment must be spared the effects of nuclear weapons and all other means of mass destruction. States must strive to reach prompt agreement, in the relevant international organs, on the elimination and complete destruction of such weapons.

21st plenary meeting
16 June 1972

Chapter II

ACTION PLAN FOR THE HUMAN ENVIRONMENT

A. Framework for environmental action

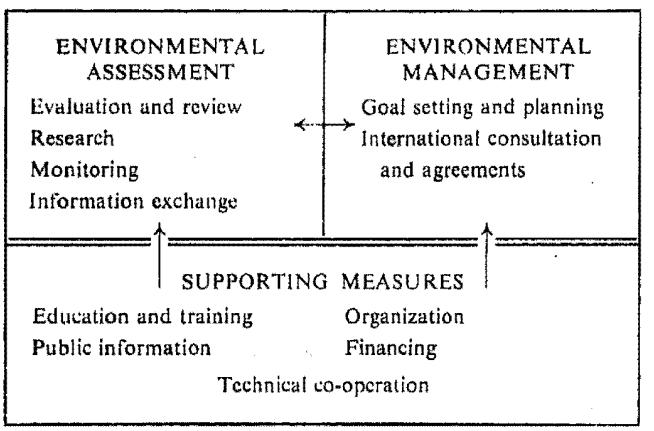
The recommendations adopted by the Conference for the substantive items on the agenda of the Conference are set out in chapter II, section B, below.[1] The recommendations have been grouped, in section C, in an Action Plan that makes it possible to identify international programmes and activities across the boundaries of all subject areas. The broad types of action that make up the Plan are:

(*a*) The global environmental assessment programme (Earthwatch);

(*b*) Environmental management activities;

(*c*) International measures to support the national and international actions of assessment and management.

The framework of the Action Plan is illustrated in the following diagram.



B. Recommendations for action at the international level

The texts of the recommendations adopted by the United Nations Conference on the Human Environment (see chapter X) are given below.[1]

PLANNING AND MANAGEMENT OF HUMAN SETTLEMENTS FOR ENVIRONMENTAL QUALITY

Recommendation 1

The planning, improvement and management of rural and urban settlements demand an approach, at all levels, which embraces all aspects of the human environment, both natural and man-made. Accordingly, *it is recommended:*

(*a*) That all development assistance agencies, whether international, such as the United Nations Development Programme and the International Bank for Reconstruction and Development, regional or national, should in their development assistance activities also give high priority within available resources to requests from Governments for assistance in the planning of human settlements, notably in housing, transportation, water, sewerage and public health, the mobilization of human and financial resources, the improvement of transitional urban settlements and the provision and maintenance of essential community services, in order to achieve as far as possible the social well-being of the receiving country as a whole;

(*b*) That these agencies also be prepared to assist the less industrialized countries in solving the environmental problems of development projects; to this end they should actively support the training and encourage the recruitment of requisite personnel, as far as possible within these countries themselves.

Recommendation 2

1. *It is recommended* that Governments should designate to the Secretary-General areas in which they have committed themselves (or are prepared to commit themselves) to a long-term programme of improvement and global promotion of the environment.

(*a*) In this connexion, countries are invited to share internationally all relevant information on the problems they encounter and the solutions they devise in developing these areas.

(*b*) Countries concerned will presumably appoint an appropriate body to plan such a programme, and to supervise its implementation, for areas which could vary in size from a city block to a national region; presumably, too, the programme will be designated to serve, among other purposes, as a vehicle for the preparation and launching of experimental and pilot projects.

(*c*) Countries which are willing to launch an improvement programme should be prepared to welcome international co-operation, seeking the advice or assistance of competent international bodies.

2. *It is further recommended:*

(*a*) That in order to ensure the success of the programme, Governments should urge the Secretary-General to undertake a process of planning and co-ordination whereby contact would be established with

[1] For the correspondence between the numbers of the recommendations as they appear in chapter II, section B, and the numbers of the recommendations as adopted by the Conference, see annex V below.

nations likely to participate in the programme; international teams of experts might be assembled for that purpose;

(*b*) That a Conference/Demonstration on Experimental Human Settlements should be held under the auspices of the United Nations in order to provide for co-ordination and the exchange of information and to demonstrate to world public opinion the potential of this approach by means of a display of experimental projects;

(*c*) That nations should take into consideration Canada's offer to organize such a Conference/Demonstration and to act as host to it.

Recommendation 3

Certain aspects of human settlements can have international implications, for example, the "export" of pollution from urban and industrial areas, and the effects of seaports on international hinterlands. Accordingly, *it is recommended* that the attention of Governments be drawn to the need to consult bilaterally or regionally whenever environmental conditions or development plans in one country could have repercussions in one or more neighbouring countries.

Recommendation 4

1. *It is recommended* that Governments and the Secretary-General, the latter in consultation with the appropriate United Nations agencies, take the following steps:

(*a*) Entrust the over-all responsibility for an agreed programme of environmental research at the international level to any central body that may be given the co-ordinating authority in the field of the environment, taking into account the co-ordination work already being provided on the regional level, especially by the Economic Commission for Europe;

(*b*) Identify, wherever possible, an existing agency within the United Nations system as the principal focal point for initiating and co-ordinating research in each principal area and, where there are competing claims, establish appropriate priorities;

(*c*) Designate the following as priority areas for research:

(i) Theories, policies and methods for the comprehensive environmental development of urban and rural settlements;

(ii) Methods of assessing quantitative housing needs and of formulating and implementing phased programmes designed to satisfy them (principal bodies responsible: Department of Economic and Social Affairs of the United Nations Secretariat, regional economic commissions and United Nations Economic and Social Office in Beirut);

(iii) Environmental socio-economic indicators of the quality of human settlements, particularly in terms of desirable occupancy standards and residential densities, with a view to identifying their time trends;

(iv) Socio-economic and demographic factors underlying migration and spatial distribution of population, including the problem of transitional settlements (principal bodies responsible: Department of Economic and Social Affairs of the United Nations Secretariat (Centre for Housing, Building and Planning), United Nations Educational, Scientific and Cultural Organization, World Health Organization, International Labour Organisation, Food and Agriculture Organization of the United Nations);

(v) Designs, technologies, financial and administrative procedures for the efficient and expanded production of housing and related infra-structure, suitably adapted to local conditions;

(vi) Water supply, sewerage and waste-disposal systems adapted to local conditions, particularly in semi-tropical, tropical, Arctic and sub-Arctic areas (principal body responsible: World Health Organization);

(vii) Alternative methods of meeting rapidly increasing urban transportation needs (principal bodies responsible: Department of Economic and Social Affairs of the United Nations Secretariat (Resources and Transport Division and Centre for Housing, Building and Planning));

(viii) Physical, mental and social effects of stresses created by living and working conditions in human settlements, particularly urban conglomerates, for example the accessibility of buildings to persons whose physical mobility is impaired (principal bodies responsible: International Labour Organisation, World Health Organization, United Nations Educational, Scientific and Cultural Organization, Department of Economic and Social Affairs of the United Nations Secretariat).

2. *It is further recommended* that Governments consider co-operative arrangements to undertake the necessary research whenever the above-mentioned problem areas have a specific regional impact. In such cases, provision should be made for the exchange of information and research findings with countries of other geographical regions sharing similar problems.

Recommendation 5

It is recommended:

(*a*) That Governments take steps to arrange for the exchange of visits by those who are conducting research in the public or private institutions of their countries;

(*b*) That Governments and the Secretary-General ensure the acceleration of the exchange of information concerning past and on-going research, experimentation and project implementation covering all aspects of human settlements, which is conducted by the United Nations system or by public or private entities, including academic institutions.

Recommendation 6

It is recommended that Governments and the Secretary-General give urgent attention to the training of those who

are needed to promote integrated action on the planning, development and management of human settlements.

Recommendation 7

It is recommended:

(*a*) That Governments and the Secretary-General provide equal possibilities for everybody, both by training and by ensuring access to relevant means and information, to influence their own environment by themselves;

(*b*) That Governments and the Secretary-General ensure that the institutions concerned shall be strengthened and that special training activities shall be established, making use of existing projects of regional environmental development, for the benefit of the less industrialized countries, covering the following:

(i) Intermediate and auxiliary personnel for national public services who, in turn, would be in a position to train others for similar tasks (principal bodies responsible: World Health Organization, Department of Economic and Social Affairs of the United Nations Secretariat (Centre for Housing, Building and Planning), United Nations Industrial Development Organization, Food and Agriculture Organization of the United Nations);

(ii) Specialists in environmental planning and in rural development (principal bodies responsible: Department of Economic and Social Affairs of the United Nations Secretariat (Centre for Housing, Building and Planning), Food and Agriculture Organization of the United Nations);

(iii) Community developers for self-help programmes for low-income groups (principal body responsible: Department of Economic and Social Affairs of the United Nations Secretariat (Centre for Housing, Building and Planning));

(iv) Specialists in working environments (principal bodies responsible: International Labour Organisation, Department of Economic and Social Affairs of the United Nations Secretariat (Centre for Housing, Building and Planning), World Health Organization);

(v) Planners and organizers of mass transport systems and services with special reference to environmental development (principal body responsible: Department of Economic and Social Affairs of the United Nations Secretariat (Resources and Transport Division)).

Recommendation 8

It is recommended that regional institutions take stock of the requirements of their regions for various environmental skills and of the facilities available to meet those requirements in order to facilitate the provision of appropriate training within regions.

Recommendation 9

It is recommended that the World Health Organization increase its efforts to support Governments in planning for improving water supply and sewerage services through its community water supply programme, taking account, as far as possible, of the framework of total environment programmes for communities.

Recommendation 10

It is recommended that development assistance agencies should give higher priority, where justified in the light of the social benefits, to supporting Governments in financing and setting up services for water supply, disposal of water from all sources, and liquid-waste and solid-waste disposal and treatment as part of the objectives of the Second United Nations Development Decade.

Recommendation 11

It is recommended that the Secretary-General ensure that, during the preparations for the 1974 World Population Conference, special attention shall be given to population concerns as they relate to the environment and, more particularly, to the environment of human settlements.

Recommendation 12

1. *It is recommended* that the World Health Organization and other United Nations agencies should provide increased assistance to Governments which so request in the field of family planning programmes without delay.

2. *It is further recommended* that the World Health Organization should promote and intensify research endeavour in the field of human reproduction, so that the serious consequences of population explosion on human environment can be prevented.

Recommendation 13

It is recommended that the United Nations agencies should focus special attention on the provision of assistance for combating the menace of human malnutrition rampant in many parts of the world. Such assistance will cover training, research and development endeavours on such matters as causes of malnutrition, mass production of high-protein and multipurpose foods, qualitative and quantitative characteristics of routine foods, and the launching of applied nutrition programmes.

Recommendation 14

It is recommended that the intergovernmental body for environmental affairs to be established within the United Nations should ensure that the required surveys shall be made concerning the need and the technical possibilities for developing internationally agreed standards for measuring and limiting noise emissions and that, if it is deemed advisable, such standards shall be applied in the production of means of transportation and certain kinds of working equipment, without a large price increase or reduction in the aid given to developing countries.

Recommendation 15

It is recommended that the Secretary-General, in consultation with the appropriate United Nations bodies, formulate programmes on a world-wide basis to assist countries to meet effectively the requirements of growth of human settlements and to improve the quality of life in existing settlements, in particular, in squatter areas.

Recommendation 16

The programmes referred to in recommendation 15 should include the establishment of subregional centres to undertake, *inter alia*, the following functions:

(*a*) Training;

(*b*) Research;

(*c*) Exchange of information;

(*d*) Financial, technical and material assistance.

Recommendation 17

It is recommended that Governments and the Secretary-General take immediate steps towards the establishment of an international fund or a financial institution whose primary operative objectives will be to assist in strengthening national programmes relating to human settlements through the provision of seed capital and the extension of the necessary technical assistance to permit an effective mobilization of domestic resources for housing and the environmental improvement of human settlements.

Recommendation 18

It is recommended that the following recommendations be referred to the Disaster Relief Co-ordinator for his consideration, more particularly in the context of the preparation of a report to the Economic and Social Council:

1. *It is recommended* that the Secretary-General, with the assistance of the Disaster Relief Co-ordinator and in consultation with the appropriate bodies of the United Nations system and non-governmental bodies:

(*a*) Assess the over-all requirements for the timely and widespread distribution of warnings which the observational and communications networks must satisfy;

(*b*) Assess the needs for additional observational networks and other observational systems for natural disaster detection and warnings for tropical cyclones (typhoons, hurricanes, cyclones etc.) and their associated storm surges, torrential rains, floods, tsunamis, earthquakes etc.;

(*c*) Evaluate the existing systems for the international communication of disaster warnings, in order to determine the extent to which these require improvement;

(*d*) On the basis of these assessments, promote, through existing national and international organizations, the establishment of an effective world-wide natural disaster warning system, with special emphasis on tropical cyclones and earthquakes, taking full advantage on existing systems and plans, such as the World Weather Watch, the World Meteorological Organization's Tropical Cyclone Project, the International Tsunami Warning System, the World-Wide Standardized Seismic Network, and the Desert Locust Control Organization;

(*e*) Invite the World Meteorological Organization to promote research on the periodicity and intensity of the occurrence of droughts, with a view to developing improved forecasting techniques.

2. *It is further recommended* that the United Nations Development Programme and other appropriate international assistance agencies give priority in responding to requests from Governments for the establishment and improvement of natural disaster research programmes and warning systems.

3. *It is recommended* that the Secretary-General ensure that the United Nations system shall provide to Governments a comprehensive programme of advice and support in disaster prevention. More specifically, the question of disaster prevention should be seen as an integral part of the country programme as submitted to, and reviewed by, the United Nations Development Programme.

4. *It is recommended* that the Secretary-General take the necessary steps to ensure that the United Nations system shall assist countries with their planning for pre-disaster preparedness. To this end:

(*a*) An international programme of technical co-operation should be developed, designed to strengthen the capabilities of Governments in the field of pre-disaster planning, drawing upon the services of the resident representatives of the United Nations Development Programme;

(*b*) The United Nations Disaster Relief Office, with the assistance of relevant agencies of the United Nations, should organize plans and programmes for international co-operation in cases of natural disasters;

(*c*) As appropriate, non-governmental international agencies and individual Governments should be invited to participate in the preparation of such plans and programmes.

ENVIRONMENTAL ASPECTS OF NATURAL RESOURCES MANAGEMENT

Recommendation 19

It is recommended that the Food and Agriculture Organization of the United Nations, in co-operation with other relevant international organizations, should include in its programme questions relating to rural planning in relation to environmental policy, since environmental policy is formulated in close association with physical planning and with medium-term and long-term economic and social planning. Even in highly industrialized countries, rural areas still cover more than 90 per cent of the territory and consequently should not be regarded as a residual sector and a mere reserve of land and manpower. The programme should therefore include, in particular:

(*a*) Arrangements for exchanges of such data as are available;

(*b*) Assistance in training and informing specialists and the public, especially young people, from primary school age onwards;

(*c*) The formulation of principles for the development of rural areas, which should be understood to comprise not only agricultural areas as such but also small- and medium-sized settlements and their hinterland.

Recommendation 20

It is recommended that the Food and Agriculture Organization of the United Nations, in co-operation

with other international agencies concerned, strengthen the necessary machinery for the international acquisition of knowledge and transfer of experience on soil capabilities, degradation, conservation and restoration, and to this end:

(*a*) Co-operative information exchange should be facilitated among those nations sharing similar soils, climate and agricultural conditions;

(i) The Soil Map of the World being prepared by the Food and Agriculture Organization of the United Nations, the United Nations Educational, Scientific and Cultural Organization and the International Society of Soil Science should serve to indicate those areas among which transfer of knowledge on soil potentialities and soil degradation and restoration would be most valuable;

(ii) This map should be supplemented through the establishment of international criteria and methods for the assessment of soil capabilities and degradations and the collection of additional data based upon these methods and criteria. This should permit the preparation of a World Map of Soil Degradation Hazards as a framework for information exchange in this area;

(iii) Information exchange on soil use should account for similarities in vegetation and other environmental conditions as well as those of soil, climate, and agricultural practices;

(iv) The FAO Soil Data-Processing System should be developed beyond soil productivity considerations, to include the above-mentioned data and relevant environmental parameters, and to facilitate information exchange between national soil institutions, and eventually soil-monitoring stations;

(*b*) International co-operative research on soil capabilities and conservation should be strengthened and broadened to include:

(i) Basic research on soil degradation processes in selected ecosystems under the auspices of the Man and the Biosphere Programme. This research should be directed as a matter of priority to those arid areas that are most threatened;

(ii) Applied research on soil and water conservation practices under specific land-use conditions with the assistance of the Food and Agriculture Organization of the United Nations and, where appropriate, other agencies (United Nations Educational, Scientific and Cultural Organization, World Health Organization and International Atomic Energy Agency);

(iii) Strengthening of existing research centres and, where necessary, establishment of new centres with the object of increasing the production from dry farming areas without any undue impairment of the environment;

(iv) Research on the use of suitable soils for waste disposal and recycling; the United Nations Industrial Development Organization, the Food and Agriculture Organization of the United Nations, and the World Health Organization should enter into joint consultations regarding the feasibility of an international programme in this area;

(*c*) These efforts for international co-operation in research and information exchange on soils should be closely associated with those of the UNDP/WMO/FAO/UNESCO programme of agricultural biometeorology, in order to facilitate integration of data and practical findings and to support the national programmes of conservation of soil resources recommended above;

(*d*) It should moreover be noted that in addition to the various physical and climatic phenomena which contribute to soil degradation, economic and social factors contribute to it as well; among the economic contributory factors, one which should be particularly emphasized is the payment of inadequate prices for the agricultural produce of developing countries, which prevents farmers in those countries from setting aside sufficient savings for necessary investments in soil regeneration and conservation. Consequently, urgent remedial action should be taken by the organizations concerned to give new value and stability to the prices of raw materials of the developing countries.

Recommendation 21

It is recommended that Governments, the Food and Agriculture Organization of the United Nations and the World Health Organization, in co-operation with the United Nations Educational, Scientific and Cultural Organization and the International Atomic Energy Agency, strengthen and co-ordinate international programmes for integrated pest control and reduction of the harmful effects of agro-chemicals:

(*a*) Existing international activities for the exchange of information and co-operative research and technical assistance to developing countries should be strengthened to support the national programmes described above, with particular reference to:

(i) Basic research on ecological effects of pesticides and fertilizers (MAB);

(ii) Use of radio-isotope and radiation techniques in studying the fate of pesticides in the environment (joint IAEA/FAO Division);

(iii) Evaluation of the possibility of using pesticides of biological origin in substitution for certain chemical insecticides which cause serious disturbances in the environment;

(iv) Dose and timing of fertilizers' application and their effects on soil productivity and the environment (Food and Agriculture Organization of the United Nations);

(v) Management practices and techniques for integrated pest control, including biological control (Food and Agriculture Organization of the United Nations and World Health Organization);

(vi) Establishment and/or strengthening of national and regional centres for integrated pest control, particularly in developing countries (Food and Agriculture Organization of the United Nations and World Health Organization);

(*b*) Existing expert committees of the Food and Agriculture Organization of the United Nations and the World Health Organization on various aspects of pest control should be convened periodically:

(i) To assess recent advances in the relevant fields of research mentioned above;

(ii) To review and further develop international guidelines and standards with special reference to national and ecological conditions in relation to the use of chlorinated hydrocarbons, pesticides containing heavy metals, and the use and experimentation of biological controls;

(*c*) In addition, *ad hoc* panels of experts should be convened, by the Food and Agriculture Organization of the United Nations, the World Health Organization and, where appropriate, the International Atomic Energy Agency, in order to study specific problems, and facilitate the work of the above-mentioned committees.

Recommendation 22

It is recommended that the Food and Agriculture Organization of the United Nations, under its "War on Waste" programme, place increased emphasis on control and recycling of wastes in agriculture:

(*a*) This programme should assist the national activities relating to:

(i) Control and recycling of crop residues and animal wastes;

(ii) Control and recycling of agro-industrial waste;

(iii) Use of municipal wastes as fertilizers;

(*b*) The programme should also include measures to avoid wasteful use of natural resources through the destruction of unmarketable agricultural products or their use for improper purposes.

Recommendation 23

It is recommended that Governments, in co-operation with the Food and Agriculture Organization of the United Nations and other agencies and bodies, establish and strengthen regional and international machinery for the rapid development and management of domesticated livestock of economic importance and their related environmental aspects as part of the ecosystems, particularly in areas of low annual productivity, and thus encourage the establishment of regional livestock research facilities, councils and commissions, as appropriate.

Recommendation 24

It is recommended that the Secretary-General take steps to ensure that the United Nations bodies concerned co-operate to meet the needs for new knowledge on the environmental aspects of forests and forest management:

(*a*) Where appropriate, research should be promoted, assisted, co-ordinated, or undertaken by the Man and the Biosphere Programme (UNESCO), in close co-operation with the Food and Agriculture Organization of the United Nations and the World Meteorological Organization, and with the collaboration of the International Council of Scientific Unions and the International Union of Forestry Research Organizations;

(*b*) Research on comparative legislation, land tenure, institutions, tropical forest management, the effects of the international trade in forest products on national forest environments, and public administration, should be sponsored or co-ordinated by FAO, in co-operation with other appropriate international and regional organizations;

(*c*) The Food and Agriculture Organization of the United Nations, in conjunction with the United Nations Educational, Scientific and Cultural Organization and other appropriate international organizations, should give positive advice to member countries on the important role of forests with reference to, and in conjunction with, the conservation of soil, watersheds, the protection of tourist sites and wildlife, and recreation, within the over-all framework of the interests of the biosphere.

Recommendation 25

It is recommended that the Secretary-General take steps to ensure that continuing surveillance, with the co-operation of Member States, of the world's forest cover shall be provided for through the programmes of the Food and Agriculture Organization of the United Nations and the United Nations Educational, Scientific and Cultural Organization.

(*a*) Such a World Forest Appraisal Programme would provide basic data, including data on the balance between the world's forest biomass and the prevailing environment, and changes in the forest biomass, considered to have a significant impact on the environment;

(*b*) The information could be collected from existing inventories and on-going activities and through remote-sensing techniques;

(*c*) The forest protection programme described above might be incorporated within this effort, through the use of advanced technology, such as satellites which use different types of imagery and which could constantly survey all forests.

Recommendation 26

It is recommended that the Food and Agriculture Organization of the United Nations co-ordinate an international programme for research and exchange of information on forest fires, pests and diseases:

(*a*) The programme should include data collection and dissemination, identification of potentially susceptible areas and of means of suppression; exchange of information on technologies, equipment and techniques; research, including integrated pest control and the influence of fires on forest ecosystems, to be undertaken by the International Union of Forestry Research Organizations; establishment of a forecasting system in co-operation with the World Meteorological Organization; organization of seminars and study tours; the facilitation of bilateral agreements for forest protection between neighbouring countries, and the development of effective international quarantines;

(*b*) Forest fires, pests and diseases will frequently each require separate individual treatment.

Recommendation 27

It is recommended that the Food and Agriculture Organization of the United Nations facilitate the transfer of information on forests and forest management:

(*a*) The amount of knowledge that can usefully be exchanged is limited by the differences of climatic zones and forest types;

(*b*) The exchange of information should, however, be encouraged among nations sharing similarities; considerable knowledge is already exchanged among the industrialized nations of the temperate zone;

(*c*) Opportunities exist, despite differences, for the useful transfer of information to developing countries on the environmental aspects of such items as: (i) the harvesting and industrialization of some tropical hardwoods; (ii) pine cultures; (iii) the principles of forest management systems and management science; (iv) soils and soil interpretations relating to forest management; (v) water régimes and watershed management; (vi) forest industries pollution controls, including both technical and economic data; (vii) methods for the evaluation of forest resources through sampling techniques, remote sensing, and data-processing; (viii) control of destructive fires and pest outbreaks; and (ix) co-ordination in the area of the definition and standardization of criteria and methods for the economic appraisal of forest environmental influences and for the comparison of alternative uses.

Recommendation 28

It is recommended that the Food and Agriculture Organization of the United Nations strengthen its efforts in support of forestry projects and research projects, possibly for production, in finding species which are adaptable even in areas where this is exceptionally difficult because of ecological conditions.

Recommendation 29

It is recommended that the Secretary-General ensure that the effect of pollutants upon wildlife shall be considered, where appropriate, within environmental monitoring systems. Particular attention should be paid to those species of wildlife that may serve as indicators for future wide environmental disturbances, and an ultimate impact upon human populations.

Recommendation 30

It is recommended that the Secretary-General ensure the establishment of a programme to expand present data-gathering processes so as to assess the total economic value of wildlife resources.

(*a*) Such data would facilitate the task of monitoring the current situation of animals endangered by their trade value, and demonstrate to questioning nations the value of their resources;

(*b*) Such a programme should elaborate upon current efforts of the Food and Agriculture Organization of the United Nations and might well produce a yearbook of wildlife [2] statistics.

Recommendation 31

It is recommended that the Secretary-General ensure that the appropriate United Nations agencies co-operate with the Governments of the developing countries to develop special short-term training courses on wildlife [2] management:

(*a*) Priority should be given to conversion courses for personnel trained in related disciplines such as forestry or animal husbandry;

(*b*) Special attention should be given to the establishment and support of regional training schools for technicians.

Recommendation 32

It is recommended that Governments give attention to the need to enact international conventions and treaties to protect species inhabiting international waters or those which migrate from one country to another:

(*a*) A broadly-based convention should be considered which would provide a framework by which criteria for game regulations could be agreed upon and the over-exploitation of resources curtailed by signatory countries;

(*b*) A working group should be set up as soon as possible by the appropriate authorities to consider these problems and to advise on the need for, and possible scope of, such conventions or treaties.

Recommendation 33

It is recommended that Governments agree to strengthen the International Whaling Commission, to increase international research efforts, and as a matter of urgency to call for an international agreement, under the auspices of the International Whaling Commission and involving all Governments concerned, for a 10-year moratorium on commercial whaling.

Recommendation 34

It is recommended that Governments and the Secretary-General give special attention to training requirements in the management of parks and protected areas:

(*a*) High-level training should be provided and supported:

(i) In addition to integrating aspects of national parks planning and management into courses on forestry and other subjects, special degrees should be offered in park management; the traditional forestry, soil and geology background of the park manager must be broadened into an integrated approach;

(ii) Graduate courses in natural resources administration should be made available in at least one major university in every continent;

[2] Whereas elsewhere in this report the expression "wildlife" is meant to include both animals and plants, it should be understood here to be restricted to the most important animals.

(*b*) Schools offering courses in national park management at a medium-grade level should be assisted by the establishment or expansion of facilities, particularly in Latin America and Asia.

Recommendation 35

It is recommended that the Secretary-General take steps to ensure that an appropriate mechanism shall exist for the exchange of information on national parks legislation and planning and management techniques developed in some countries which could serve as guidelines to be made available to any interested country.

Recommendation 36

It is recommended that the Secretary-General take steps to ensure that the appropriate United Nations agencies shall assist the developing countries to plan for the inflow of visitors into their protected areas in such a way as to reconcile revenue and environmental considerations within the context of the recommendations approved by the Conference. The other international organizations concerned may likewise make their contribution.

Recommendation 37

It is recommended that Governments take steps to co-ordinate, and co-operate in the management of, neighbouring or contiguous protected areas. Agreement should be reached on such aspects as mutual legislation, patrolling systems, exchange of information, research projects, collaboration on measures of burning, plant and animal control, fishery regulations, censuses, tourist circuits and frontier formalities.

Recommendation 38

It is recommended that Governments take steps to set aside areas representing ecosystems of international significance for protection under international agreement.

Recommendation 39

It is recommended that Governments, in co-operation with the Secretary-General of the United Nations and the Food and Agriculture Organization of the United Nations where indicated, agree to an international programme to preserve the world's genetic resources:

(*a*) Active participation at the national and international levels is involved. It must be recognized, however, that while survey, collection, and dissemination of these genetic resources are best carried out on a regional or international basis, their actual evaluation and utilization are matters for specific institutions and individual workers; international participation in the latter should concern exchange of techniques and findings;

(*b*) An international network is required with appropriate machinery to facilitate the interchange of information and genetic material among countries;

(*c*) Both static (seed banks, culture collection etc.) and dynamic (conservation of populations in evolving natural environments) ways are needed.

(*d*) Action is necessary in six interrelated areas:

(i) Survey of genetic resources;

(ii) Inventory of collections;

(iii) Exploration and collecting;

(iv) Documentation;

(v) Evaluation and utilization;

(vi) Conservation, which represents the crucial element to which all other programmes relate;

(*e*) Although the international programme relates to all types of genetic resources, the action required for each resource will vary according to existing needs and activities.

Recommendation 40

It is recommended that Governments, in co-operation with the Secretary-General of the United Nations and the Food and Agriculture Organization of the United Nations where indicated, make inventories of the genetic resources most endangered by depletion or extinction:

(*a*) All species threatened by man's development should be included in such inventories;

(*b*) Special attention should be given to locating in this field those areas of natural genetic diversity that are disappearing;

(*c*) These inventories should be reviewed periodically and brought up to date by appropriate monitoring;

(*d*) The survey conducted by FAO in collaboration with the International Biological Programme is designed to provide information on endangered crop genetic resources by 1972, but will require extension and follow-up.

Recommendation 41

It is recommended that Governments, in co-operation with the Secretary-General of the United Nations and the Food and Agriculture Organization of the United Nations where indicated, compile or extend, as necessary, registers of existing collections of genetic resources:

(*a*) Such registers should identify which breeding and experiment stations, research institutions and Universities maintain which collections;

(*b*) Major gaps in existing collections should be identified where material is in danger of being lost;

(*c*) These inventories of collections should be transformed for computer handling and made available to all potential users;

(*d*) In respect of plants:

(i) It would be expected that the "advanced varieties" would be well represented, but that primitive materials would be found to be scarce and require subsequent action;

(ii) The action already initiated by FAO, several national institutions, and international foundations should be supported and expanded.

(*e*) In respect of micro-organisms, it is recommended that each nation develop comprehensive inventories of culture collections:

(i) A cataloguing of the large and small collections and the value of their holdings is required, rather than a listing of individual strains;

(ii) Many very small but unique collections, sometimes the works of a single specialist, are lost;

(iii) Governments should make sure that valuable gene pools held by individuals or small institutes are also held in national or regional collections.

(*f*) In respect of animal germ plasm, it is recommended that FAO establish a continuing mechanism to assess and maintain catalogues of the characteristics of domestic animal breeds, types and varieties in all nations of the world. Likewise, FAO should establish such lists where required.

(*g*) In respect of aquatic organisms, it is recommended that FAO compile a catalogue of genetic resources of cultivated species and promote intensive studies on the methods of preservation and storage of genetic material.

Recommendation 42

It is recommended that Governments, in co-operation with the Secretary-General of the United Nations and the Food and Agriculture Organization of the United Nations where indicated, initiate immediately, in co-operation with all interested parties, programmes of exploration and collection wherever endangered species have been identified which are not included in existing collections:

(*a*) An emergency programme, with the co-operation of the Man and the Biosphere Programme, of plant exploration and collection should be launched on the basis of the FAO List of Emergency Situations for a five-year period;

(*b*) With regard to forestry species, in addition to the efforts of the Danish/FAO Forest Tree Seed Centre, the International Union of Forestry Research Organizations, and the FAO Panel of Experts on Forest Gene Resources, support is needed for missions planned for Latin America, West Africa, the East Indies and India.

Recommendation 43

It is recommended that Governments, in co-operation with the Secretary-General of the United Nations and the Food and Agriculture Organization of the United Nations where indicated:

1. Recognize that conservation is a most crucial part of any genetic resources programme. Moreover, major types of genetic resources must be treated separately because:

(*a*) They are each subject to different programmes and priorities;

(*b*) They serve different uses and purposes;

(*c*) They require different expertise, techniques and facilities;

2. In respect of plant germ plasms (agriculture and forestry), organize and equip national or regional genetic resources conservation centres:

(*a*) Such centres as the National Seed Storage Laboratory in the United States of America and the Vavilov Institute of Plant Industry in the Union of Soviet Socialist Republics already provide good examples;

(*b*) Working collections should be established separately from the basic collections; these will usually be located at plant and breeding stations and will be widely distributed;

(*c*) Three classes of genetic crop resources must be conserved:

(i) High-producing varieties in current use and those they have superseded;

(ii) Primitive varieties of traditional pre-scientific agriculture (recognized as genetic treasuries for plant improvement);

(iii) Mutations induced by radiation or chemical means;

(*d*) Species contributing to environmental improvement, such as sedge used to stabilize sand-dunes, should be conserved;

(*e*) Wild or weed relatives of crop species and those wild species of actual or potential use in rangelands, industry, new crops etc. should be included;

3. In respect of plant germ plasms (agriculture and forestry), maintain gene pools of wild plant species within their natural communities. Therefore:

(*a*) It is essential that primeval forests, bushlands and grasslands which contain important forest genetic resources be identified and protected by appropriate technical and legal means; systems of reserves exist in most countries, but a strengthening of international understanding on methods of protection and on availability of material may be desired;

(*b*) Conservation of species of medical, aesthetic or research value should be assured;

(*c*) The network of biological reserves proposed by UNESCO (Man and the Biosphere Programme) should be designed, where feasible, to protect these natural communities;

(*d*) Where protection in nature becomes uncertain or impossible, then means such as seed storage or living collections in provenance trials or botanic gardens must be adopted;

4. Fully implement the programmes initiated by the FAO Panels of Experts on forest gene resources in 1968 and on plant exploration and introduction in 1970;

5. In respect of animal germ plasms, consider the desirability and feasibility of international action to preserve breeds or varieties of animals:

(*a*) Because such an endeavour would constitute a major effort beyond the scope of any one nation, FAO would be the logical executor of such a project. Close co-operation with Governments would be necessary, however. The International Union for Conservation of Nature and Natural Resources might, logically, be given responsibility for wild species, in co-operation with FAO, the Man and the Biosphere Programme (UNESCO), and Governments;

(*b*) Any such effort should also include research on methods of preserving, storing, and transporting germ plasm;

(*c*) Specific methods for the maintenance of gene pools of aquatic species should be developed;

(*d*) The recommendations of the FAO Working Party Meeting on Genetic Selection and Conservation of Genetic Resources of Fish, held in 1971, should be implemented;

6. In respect of micro-organism germ plasms, co-operatively establish and properly fund a few large regional collections:

(*a*) Full use should be made of major collections now in existence;

(*b*) In order to provide geographical distribution and access to the developing nations, regional centres should be established in Africa, Asia and Latin America and the existing centres in the developed world should be strengthened;

7. Establish conservation centres of insect germ plasm. The very difficult and long process of selecting or breeding insects conducive to biological control programmes can begin only in this manner.

Recommendation 44

It is recommended that Governments, in co-operation with the Secretary-General of the United Nations and the Food and Agriculture Organization of the United Nations where indicated, recognize that evaluation and utilization are critical corollaries to the conservation of genetic resources. In respect of crop-breeding programmes, it is recommended that Governments give special emphasis to:

(*a*) The quality of varieties and breeds and the potential for increased yields;

(*b*) The ecological conditions to which the species are adapted;

(*c*) The resistance to diseases, pests and other adverse factors;

(*d*) The need for a multiplicity of efforts so as to increase the chances of success.

Recommendation 45

It is recommended that Governments, in co-operation with the Secretary-General of the United Nations and the Food and Agriculture Organization of the United Nations where indicated:

1. Collaborate to establish a global network of national and regional institutes relating to genetic resource conservation based on agreements on the availability of material and information, on methods, on technical standards, and on the need for technical and financial assistance wherever required:

(*a*) Facilities should be designed to assure the use of the materials and information: (i) by breeders, to develop varieties and breeds both giving higher yields and having higher resistance to local pests and diseases and other adverse factors; and (ii) by users providing facilities and advice for the safest and most profitable utilization of varieties and breeds most adapted to local conditions;

(*b*) Such co-operation would apply to all genetic resource conservation centres and to all types mentioned in the foregoing recommendations;

(*c*) Standardized storage and retrieval facilities for the exchange of information and genetic material should be developed:

(i) Information should be made generally available and its exchange facilitated through agreement on methods and technical standards;

(ii) International standards and regulations for the shipment of materials should be agreed upon;

(iii) Basic collections and data banks should be replicated in at least two distinct sites, and should remain a national responsibility;

(iv) A standardized and computerized system of documentation is required;

(*d*) Technical and financial assistance should be provided where required; areas of genetic diversity are most frequently located in those countries most poorly equipped to institute the necessary programmes;

2. Recognize that the need for liaison among the parties participating in the global system of genetic resources conservation requires certain institutional innovations. To this end:

(*a*) *It is recommended* that the appropriate United Nations agency establish an international liaison unit for plant genetic resources in order:

(i) To improve liaison between governmental and non-governmental efforts;

(ii) To assist in the liaison and co-operation between national and regional centres, with special emphasis on international agreements on methodology and standards of conservation of genetic material, standardization and co-ordination of computerized record systems, and the exchange of information and material between such centres;

(iii) To assist in implementing training courses in exploration, conservation and breeding methods and techniques;

(iv) To act as a central repository for copies of computerized information on gene pools (discs and tapes);

(v) To provide the secretariat for periodic meetings of international panels and seminars on the subject; a conference on germ plasm conservation might be convened to follow up the successful conference of 1967;

(vi) To plan and co-ordinate the five-year emergency programme on the conservation of endangered species;

(vii) To assist Governments further, wherever required, in implementing their national programmes;

(viii) To promote the evaluation and utilization of genetic resources at the national and international levels;

(*b*) *It is recommended* that the appropriate United Nations agency initiate the required programme on micro-organism germ plasm:

(i) Periodic international conferences involving those concerned with the maintenance of and research

on gene pools of micro-organisms should be supported;

(ii) Such a programme might interact with the proposed regional culture centres by assuring that each centre places high priority on the training of scientists and technicians from the developing nations; acting as a necessary liaison; and lending financial assistance to those countries established outside the developed countries;

(iii) The international exchange of pure collections of micro-organisms between the major collections of the world has operated for many years and requires little re-enforcement;

(iv) Study should be conducted particularly on waste disposal and recycling, controlling diseases and pests, and food technology and nutrition;

(*c*) *It is recommended* that the Food and Agriculture Organization of the United Nations institute a programme in respect of animal germ plasm to assess and maintain catalogues of the economic characteristics of domestic animal breeds and types and of wild species and to establish gene pools of potentially useful types;

(*d*) *It is recommended* that the Man and the Biosphere project on the conservation of natural areas and the genetic material contained therein should be adequately supported.

Recommendation 46

It is recommended that Governments, and the Secretary-General in co-operation with the Food and Agriculture Organization of the United Nations and other United Nations organizations concerned, as well as development assistance agencies, take steps to support recent guidelines, recommendations and programmes of the various international fishing organizations. A large part of the needed international action has been identified with action programmes initiated by FAO and its Intergovernmental Committee on Fisheries and approximately 24 other bilateral and multilateral international commissions, councils and committees. In particular these organizations are planning and undertaking:

(*a*) Co-operative programmes such as that of LEPOR (Long-Term and Expanded Programme of Oceanic Research), GIPME (Global Investigation of Pollution in the Marine Environment) and IBP (International Biological Programme);

(*b*) Exchange of data, supplementing and expanding the services maintained by FAO and bodies within its framework in compiling, disseminating and co-ordinating information on living aquatic resources and their environment and fisheries activities;

(*c*) Evaluation and monitoring of world fishery resources, environmental conditions, stock assessment, including statistics on catch and effort, and the economics of fisheries;

(*d*) Assistance to Governments in interpreting the implications of such assessments, identifying alternative management measures, and formulating required actions;

(*e*) Special programmes and recommendations for management of stocks of fish and other aquatic animals proposed by the existing international fishery bodies. Damage to fish stocks has often occurred because regulatory action is taken too slowly. In the past, the need for management action to be nearly unanimous has reduced action to the minimum acceptable level.

Recommendation 47

It is recommended that Governments, and the Secretary-General of the United Nations in co-operation with the Food and Agriculture Organization of the United Nations and other United Nations organizations concerned, as well as development assistance agencies, take steps to ensure close participation of fishery agencies and interests in the preparations for the United Nations Conference on the Law of the Sea. In order to safeguard the marine environment and its resources through the development of effective and workable principles and laws, the information and insight of international and regional fishery bodies, as well as the national fishery agencies are essential.

Recommendation 48

It is recommended that Governments, and the Secretary-General in co-operation with the Food and Agriculture Organization of the United Nations and other United Nations organizations concerned, as well as development assistance agencies, take steps to ensure international co-operation in the research, control and regulation of the side effects of national activities in resource utilization where these affect the aquatic resources of other nations:

(*a*) Estuaries, intertidal marshes, and other near-shore and in-shore environments play a crucial role in the maintenance of several marine fish stocks. Similar problems exist in those fresh-water fisheries that occur in shared waters;

(*b*) Discharge of toxic chemicals, heavy metals, and other wastes may affect even high-seas resources;

(*c*) Certain exotic species, notably the carp, lamprey and alewife, have invaded international waters with deleterious effects as a result of unregulated unilateral action.

Recommendation 49

It is recommended that Governments, and the Secretary-General of the United Nations in co-operation with the Food and Agriculture Organization of the United Nations and other United Nations organizations concerned, as well as development assistance agencies, take steps to develop further and strengthen facilities for collecting, analysing and disseminating data on living aquatic resources and the environment in which they live:

(*a*) Data already exist concerning the total harvest from the oceans and from certain regions in respect of individual fish stocks, their quantity, and the fishing efforts expended on them, and in respect of their population structure, distribution and changes. This coverage needs to be improved and extended;

(*b*) It is clear that a much greater range of biological parameters must be monitored and analysed in order to provide an adequate basis for evaluating the interaction of stocks and managing the combined resources of many stocks. There is no institutional constraint on this

expansion but a substantial increase in funding is needed by FAO and other international organizations concerned to meet this expanding need for data;

(*c*) Full utilization of present and expanded data facilities is dependent on the co-operation of Governments in developing local and regional data networks, making existing data available to FAO and to the international bodies, and formalizing the links between national and international agencies responsible for monitoring and evaluating fishery resources.

Recommendation 50

It is recommended that Governments, and the Secretary-General of the United Nations in co-operation with the Food and Agriculture Organization of the United Nations and other United Nations organizations concerned, as well as development assistance agencies, take steps to ensure full co-operation among Governments by strengthening the existing international and regional machinery for development and management of fisheries and their related environmental aspects and, in those regions where these do not exist, to encourage the establishment of fishery councils and commissions as appropriate.

(*a*) The operational efficiency of these bodies will depend largely on the ability of the participating countries to carry out their share of the activities and programmes;

(*b*) Technical support and servicing from the specialized agencies, in particular from FAO, is also required;

(*c*) The assistance of bilateral and international funding agencies will be needed to ensure the full participation of the developing countries in these activities.

Recommendation 51

It is recommended that Governments concerned consider the creation of river-basin commissions or other appropriate machinery for co-operation between interested States for water resources common to more than one jurisdiction.

(*a*) In accordance with the Charter of the United Nations and the principles of international law, full consideration must be given to the right of permanent sovereignty of each country concerned to develop its own resources;

(*b*) The following principles should be considered by the States concerned when appropriate:

(i) Nations agree that when major water resource activities are contemplated that may have a significant environmental effect on another country, the other country should be notified well in advance of the activity envisaged;

(ii) The basic objective of all water resource use and development activities from the environmental point of view is to ensure the best use of water and to avoid its pollution in each country;

(iii) The net benefits of hydrologic regions common to more than one national jurisdiction are to be shared equitably by the nations affected;

(*c*) Such arrangements, when deemed appropriate by the States concerned, will permit undertaking on a regional basis:

(i) Collection, analysis, and exchanges of hydrologic data through some international mechanism agreed upon by the States concerned;

(ii) Joint data-collection programmes to serve planning needs;

(iii) Assessment of environmental effects of existing water uses;

(iv) Joint study of the causes and symptoms of problems related to water resources, taking into account the technical, economic, and social considerations of water quality control;

(v) Rational use, including a programme of quality control, of the water resource as an environmental asset;

(vi) Provision for the judicial and administrative protection of water rights and claims;

(vii) Prevention and settlement of disputes with reference to the management and conservation of water resources;

(viii) Financial and technical co-operation of a shared resource;

(*d*) Regional conferences should be organized to promote the above considerations.

Recommendation 52

It is recommended that the Secretary-General take steps to ensure that appropriate United Nations bodies support government action with regard to water resources where required:

1. Reference is made to the Food and Agriculture Organization of the United Nations, the World Health Organization, the World Meteorological Organization, the Department of Economic and Social Affairs of the United Nations Secretariat (Resources and Transport Division), the United Nations Educational, Scientific and Cultural Organization/International Hydrological Decade, the regional economic commissions and the United Nations Economic and Social Office in Beirut. For example:

(*a*) The Food and Agriculture Organization of the United Nations has established a Commission on Land and Water Use for the Middle East which promotes regional co-operation in research, training and information, *inter alia* on water management problems;

(*b*) The World Health Organization has available the International Reference Centre for Waste Disposal located at Dübendorf, Switzerland, and International Reference Centre on Community Water Supply in the Netherlands;

(*c*) The World Meteorological Organization has a Commission on Hydrology which provides guidance on data collection and on the establishment of hydrological networks;

(*d*) The Resources and Transport Division of the Department of Economic and Social Affairs, United Nations Secretariat, has the United Nations Water Resources Development Centre;

(*e*) The United Nations Educational, Scientific and Cultural Organization is sponsoring the International

Hydrological Decade programme of co-ordinated research on the quality and quantity of world water resources.

2. Similar specialized centres should be established at the regional level in developing countries for training research and information exchange on:

(*a*) Inland water pollution and waste disposal in co-operation with the World Health Organization, the Food and Agriculture Organization of the United Nations, the United Nations regional economic commissions and the United Nations Economic and Social Office in Beirut;

(*b*) Water management for rain-fed and irrigated agriculture, by the Food and Agriculture Organization of the United Nations in co-operation with the regional economic commissions and the United Nations Economic and Social Office in Beirut;

(*c*) Integrated water resources planning and management in co-operation with the Department of Economic and Social Affairs of the United Nations Secretariat (Resources and Transport Division), the regional economic commissions, and the United Nations Economic and Social Office in Beirut.

Recommendation 53

It is recommended that the Secretary-General take steps to ensure that the United Nations system is prepared to provide technical and financial assistance to Governments when requested in the different functions of water resources management:

(*a*) Surveys and inventories;

(*b*) Water resources administration and policies, including:

(i) The establishment of institutional frameworks;

(ii) Economic structures of water resources management and development;

(iii) Water resources law and legislation;

(*c*) Planning and management techniques, including:

(i) The assignment of water quality standards;

(ii) The implementation of appropriate technology;

(iii) More efficient use and re-use of limited water supplies;

(*d*) Basic and applied studies and research;

(*e*) Transfer of existing knowledge;

(*f*) Continuing support of the programme of the International Hydrological Decade.

Recommendation 54

It is recommended that the Secretary-General take steps to establish a roster of experts who would be available to assist Governments, upon request, to anticipate and evaluate the environmental effects of major water development projects. Governments would have the opportunity of consulting teams of experts drawn from this roster, in the first stages of project planning. Guidelines could be prepared to assist in the review and choices of alternatives.

Recommendation 55

It is recommended that the Secretary-General take steps to conduct an exploratory programme to assess the actual and potential environmental effects of water management upon the oceans, define terms and estimate the costs for a comprehensive programme of action, and establish and maintain as far as possible:

(*a*) A world registry of major or otherwise important rivers arranged regionally and classified according to their discharge of water and pollutants;

(*b*) A world registry of clean rivers which would be defined in accordance with internationally agreed quality criteria and to which nations would contribute on a voluntary basis:

(i) The oceans are the ultimate recipient for the natural and man-made wastes discharged into the river systems of the continents;

(ii) Changes in the amount of river-flow into the oceans, as well as in its distribution in space and time, may considerably affect the physical, chemical and biological régime of the estuary regions and influence the oceanic water systems;

(iii) It would be desirable for nations to declare their intention to have admitted to the world registry of clean rivers those rivers within their jurisdiction that meet the quality criteria as defined and to declare their further intention to ensure that certain other rivers shall meet those quality criteria by some target date.

Recommendation 56

It is recommended that the Secretary-General provide the appropriate vehicle for the exchange of information on mining and mineral processing.

(*a*) Improved accessibility and dissemination of existing information is required; the body of literature and experience is already larger than one would think.

(*b*) Possibilities include the accumulation of information on: (i) the environmental conditions of mine sites; (ii) the action taken in respect of the environment; and (iii) the positive and negative environmental repercussions.

(*c*) Such a body of information could be used for prediction. Criteria for the planning and management of mineral production would emerge and would indicate where certain kinds of mining should be limited, where reclamation costs would be particularly high, or where other problems would arise.

(*d*) The appropriate United Nations bodies should make efforts to assist the developing countries by, *inter alia*, providing adequate information for each country on the technology for preventing present or future environmentally adverse effects of mining and the adverse health and safety effects associated with the mineral industry and by accepting technical trainees and sending experts.

Recommendation 57

It is recommended that the Secretary-General take steps to ensure proper collection, measurement and analysis

of data relating to the environmental effects of energy use and production within appropriate monitoring systems.

(*a*) The design and operation of such networks should include, in particular, monitoring the environmental levels resulting from emission of carbon dioxide, sulphur dioxide, oxidants, nitrogen oxides (NO_x), heat and particulates, as well as those from releases of oil and radioactivity;

(*b*) In each case the objective is to learn more about the relationships between such levels and the effects on weather, human health, plant and animal life, and amenity values.

Recommendation 58

It is recommended that the Secretary-General take steps to give special attention to providing a mechanism for the exchange of information on energy:

(*a*) The rationalization and integration of resource management for energy will clearly require a solid understanding of the complexity of the problem and of the multiplicity of alternative solutions;

(*b*) Access to the large body of existing information should be facilitated:

(i) Data on the environmental consequences of different energy systems should be provided through an exchange of national experiences, studies, seminars, and other appropriate meetings;

(ii) A continually updated register of research involving both entire systems and each of its stages should be maintained.

Recommendation 59

It is recommended that the Secretary-General take steps to ensure that a comprehensive study be promptly undertaken with the aim of submitting a first report, at the latest in 1975, on available energy sources, new technology, and consumption trends, in order to assist in providing a basis for the most effective development of the world's energy resources, with due regard to the environmental effects of energy production and use: such a study to be carried out in collaboration with appropriate international bodies such as the International Atomic Energy Agency and the Organisation for Economic Co-operation and Development.

Recommendation 60

It is recommended that the Secretary-General, in co-operation with Governments concerned and the appropriate international agencies, arrange for systematic audits of natural resource development projects in representative ecosystems of international significance to be undertaken jointly with the Governments concerned after, and where feasible before, the implementation of such projects.[3]

[3] Projects might include new agricultural settlement of sub-tropical and tropical zones, irrigation and drainage in arid zones, tropical forestry development, major hydroelectric developments, land reclamation works in tropical lowland coastal areas, and settlement of nomads in semi-arid zones. The cost of audits in developing countries should not be imputed to the costs of the resource development projects but financed from separate international sources.

Recommendation 61

It is recommended that the Secretary-General, in co-operation with Governments concerned and the appropriate international agencies, provide that pilot studies be conducted in representative ecosystems of international significance to assess the environmental impact of alternative approaches to the survey, planning and development of resource projects.

Recommendation 62

It is recommended that the Secretary-General, in co-operation with Governments concerned and the appropriate international agencies, provide that studies be conducted to find out the connexion between the distribution of natural resources and people's welfare and the reasons for possible discrepancies.

Recommendation 63

It is recommended that the Secretary-General take steps to ensure that international development assistance agencies, in co-operation with recipient Governments, intensify efforts to revise and broaden the criteria of development project analysis to incorporate environmental impact considerations.

Recommendation 64

It is recommended that the Secretary-General take steps to ensure that the United Nations agencies concerned undertake studies on the relative costs and benefits of synthetic *versus* natural products serving identical uses.

Recommendation 65

It is recommended that the Man and the Biosphere Programme be vigorously pursued by the United Nations Educational, Scientific and Cultural Organization in co-operation with other United Nations organizations and other international scientific organizations.

Recommendation 66

It is recommended that the World Meteorological Organization initiate or intensify studies on the interrelationships of resource development and meteorology.

Recommendation 67

It is recommended that the Secretary-General, in co-operation with interested Governments and United Nations specialized agencies, take the necessary steps to encourage the further development of remote-sensing techniques for resources surveys and the utilization of these techniques on the basis of proper international arrangements.

Recommendation 68

It is recommended that the Secretary-General, in co-operation with the appropriate agencies of the United Nations and other international organizations, promote jointly with interested Governments the development of methods for the integrated planning and management of natural resources, and provide, when requested, advice to Governments on such methods, in accordance with the particular environmental circumstances of each country.

Recommendation 69

It is recommended that the Food and Agriculture Organization of the United Nations expand its present programme on the stabilization of marginal lands.

IDENTIFICATION AND CONTROL OF POLLUTANTS OF BROAD INTERNATIONAL SIGNIFICANCE

A. Pollution generally

Recommendation 70

It is recommended that Governments be mindful of activities in which there is an appreciable risk of effects on climate, and to this end:

(*a*) Carefully evaluate the likelihood and magnitude of climatic effects and disseminate their findings to the maximum extent feasible before embarking on such activities;

(*b*) Consult fully other interested States when activities carrying a risk of such effects are being contemplated or implemented.

Recommendation 71

It is recommended that Governments use the best practicable means available to minimize the release to the environment of toxic or dangerous substances, especially if they are persistent substances such as heavy metals and organochlorine compounds, until it has been demonstrated that their release will not give rise to unacceptable risks or unless their use is essential to human health or food production, in which case appropriate control measures should be applied.

Recommendation 72

It is recommended that in establishing standards for pollutants of international significance, Governments take into account the relevant standards proposed by competent international organizations, and concert with other concerned Governments and the competent international organizations in planning and carrying out control programmes for pollutants distributed beyond the national jurisdiction from which they are released.

Recommendation 73

It is recommended that Governments actively support, and contribute to, international programmes to acquire knowledge for the assessment of pollutant sources, pathways, exposures and risks and that those Governments in a position to do so provide educational, technical and other forms of assistance to facilitate broad participation by countries regardless of their economic or technical advancement.

Recommendation 74

It is recommended that the Secretary-General, drawing on the resources of the entire United Nations system, and with the active support of Governments and appropriate scientific and other international bodies:

(*a*) Increase the capability of the United Nations system to provide awareness and advance warning of deleterious effects to human health and well-being from man-made pollutants;

(*b*) Provide this information in a form which is useful to policy-makers at the national level;

(*c*) Assist those Governments which desire to incorporate these and other environmental factors into national planning processes;

(*d*) Improve the international acceptability of procedures for testing pollutants and contaminants by:

(i) International division of labour in carrying out the large-scale testing programmes needed;

(ii) Development of international schedules of tests for evaluation of the environmental impact potential of specific contaminants or products. Such a schedule of tests should include consideration of both short-term and long-term effects of all kinds, and should be reviewed and brought up to date from time to time to take into account new knowledge and techniques;

(iii) Development and implementation of an international intercalibration programme for sampling and analytical techniques to permit more meaningful comparisons of national data;

(*e*) Develop plans for an International Registry of Data on Chemicals in the Environment based on a collection of available scientific data on the environmental behaviour of the most important man-made chemicals and containing production figures of the potentially most harmful chemicals, together with their pathways from factory *via* utilization to ultimate disposal or recirculation.

Recommendation 75

It is recommended that, without reducing in any way their attention to non-radioactive pollutants, Governments should:

(*a*) Explore with the International Atomic Energy Agency and the World Health Organization the feasibility of developing a registry of releases to the biosphere of significant quantities of radioactive materials;

(*b*) Support and expand, under the International Atomic Energy Agency and appropriate international organizations, international co-operation on radioactive waste problems, including problems of mining and tailings and also including co-ordination of plans for the siting of fuel-reprocessing plants in relation to the siting of the ultimate storage areas, considering also the transportation problems.

Recommendation 76

It is recommended:

(*a*) That a major effort be undertaken to develop monitoring and both epidemiological and experimental research programmes providing data for early warning and prevention of the deleterious effects of the various environmental agents, acting singly or in combination, to which man is increasingly exposed, directly or indirectly, and for the assessment of their potential risks to human health, with particular regard to the risks of mutagenicity, teratogenicity and carcinogenicity. Such programmes should be guided and co-ordinated by the World Health Organization;

(*b*) That the World Health Organization co-ordinate the development and implementation of an appropriate international collection and dissemination system to correlate medical, environmental and family-history data;

(*c*) That Governments actively support and contribute to international programmes for research and development of guidelines concerning environmental factors in the work environment.

Recommendation 77

It is recommended that the World Health Organization, in collaboration with the relevant agencies, in the context of an approved programme, and with a view to suggesting necessary action, assist Governments, particularly those of developing countries, in undertaking co-ordinated programmes of monitoring of air and water and in establishing monitoring systems in areas where there may be a risk to health from pollution.

Recommendation 78

It is recommended that internationally co-ordinated programmes of research and monitoring of food contamination by chemical and biological agent be established and developed jointly by the Food and Agriculture Organization of the United Nations and the World Health Organization, taking into account national programmes, and that the results of monitoring be expeditiously assembled, evaluated and made available so as to provide early information on rising trends of contamination and on levels that may be considered undesirable or may lead to unsafe human intakes.

Recommendation 79

It is recommended:

(*a*) That approximately 10 baseline stations be set up, with the consent of the States involved, in areas remote from all sources of pollution in order to monitor long-term global trends in atmospheric constituents and properties which may cause changes in meteorological properties, including climatic changes;

(*b*) That a much larger network of not less than 100 stations be set up, with the consent of the States involved, for monitoring properties and constituents of the atmosphere on a regional basis and especially changes in the distribution and concentration of contaminants;

(*c*) That these programmes be guided and co-ordinated by the World Meteorological Organization;

(*d*) That the World Meteorological Organization, in co-operation with the International Council of Scientific Unions (ICSU), continue to carry out the Global Atmospheric Research Programme (GARP), and if necessary establish new programmes to understand better the general circulation of the atmosphere and the causes of climatic changes whether these causes are natural or the result of man's activities.

Recommendation 80

It is recommended that the Secretary-General ensure:

(*a*) That research activities in terrestrial ecology be encouraged, supported and co-ordinated through the appropriate agencies, so as to provide adequate knowledge of the inputs, movements, residence times and ecological effects of pollutants identified as critical;

(*b*) That regional and global networks of existing and, where necessary, new research stations, research centres, and biological reserves be designated or established within the framework of the Man and the Biosphere Programme (MAB) in all major ecological regions, to facilitate intensive analysis of the structure and functioning of ecosystems under natural or managed conditions;

(*c*) That the feasibility of using stations participating in this programme for surveillance of the effects of pollutants on ecosystems be investigated;

(*d*) That programmes such as the Man and the Biosphere Programme be used to the extent possible to monitor: (i) the accumulation of hazardous compounds in biological and abiotic material at representative sites; (ii) the effect of such accumulation on the reproductive success and population size of selected species.

Recommendation 81

It is recommended that the World Health Organization, together with the international organizations concerned, continue to study, and establish, primary standards for the protection of the human organism, especially from pollutants that are common to air, water and food, as a basis for the establishment of derived working limits.

Recommendation 82

It is recommended that increased support be given to the Codex Alimentarius Commission to develop international standards for pollutants in food and a code of ethics for international food trade, and that the capabilities of the Food and Agriculture Organization of the United Nations and the World Health Organization to assist materially and to guide developing countries in the field of food control be increased.

Recommendation 83

It is recommended that the appropriate United Nations agencies develop agreed procedures for setting derived working limits for common air and water contaminants.

Recommendation 84

It is recommended that Governments make available, through the International Referral System established in pursuance of recommendation 101 of this Conference, such information as may be requested on their pollution research and pollution control activities, including legislative and administrative arrangements, research on more efficient pollution control technology, and cost-benefit methodology.

Recommendation 85

It is recommended that any mechanism for co-ordinating and stimulating the actions of the different United Nations organs in connexion with environmental problems include among its functions:

(*a*) Development of an internationally accepted procedure for the identification of pollutants of international

significance and for the definition of the degree and scope of international concern;

(*b*) Consideration of the appointment of appropriate intergovernmental, expert bodies to assess quantitatively the exposures, risks, pathways and sources of pollutants of international significance;

(*c*) Review and co-ordination of international co-operation for pollution control, ensuring in particular that needed measures shall be taken and that measures taken in regard to various media and sources shall be consistent with one another;

(*d*) Examination of the needs for technical assistance to Governments in the study of pollution problems, in particular those involving international distribution of pollutants;

(*e*) Encouragement of the establishment of consultation mechanisms for speedy implementation of concerted abatement programmes with particular emphasis on regional activities.

B. Marine pollution

Recommendation 86

It is recommended that Governments, with the assistance and guidance of appropriate United Nations bodies, in particular the Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP):

(*a*) Accept and implement available instruments on the control of the maritime sources of marine pollution;

(*b*) Ensure that the provisions of such instruments are compiled with by ships flying their flags and by ships operating in areas under their jurisdiction and that adequate provisions are made for reviewing the effectiveness of, and revising, existing and proposed international measures for control of marine pollution;

(*c*) Ensure that ocean dumping by their nationals anywhere, or by any person in areas under their jurisdiction, is controlled and that Governments shall continue to work towards the completion of, and bringing into force as soon as possible of, an over-all instrument for the control of ocean dumping as well as needed regional agreements within the framework of this instrument, in particular for enclosed and semi-enclosed seas, which are more at risk from pollution;

(*d*) Refer the draft articles and annexes contained in the report of the intergovernmental meetings at Reykjavik, Iceland, in April 1972 and in London in May 1972 to the United Nations Committee on the Peaceful Uses of the Seabed and the Ocean Floor beyond the Limits of National Jurisdiction at its session in July/August 1972 for information and comments and to a conference of Governments to be convened by the Government of the United Kingdom of Great Britain and Northern Ireland in consultation with the Secretary-General of the United Nations before November 1972 for further consideration, with a view to opening the proposed convention for signature at a place to be decided by that Conference, preferably before the end of 1972;

(*e*) Participate fully in the 1973 Intergovernmental Maritime Consultative Organization (IMCO) Conference on Maritime Pollution and the Conference on the Law of the Sea scheduled to begin in 1973, as well as in regional efforts, with a view to bringing all significant sources of pollution within the marine environment, including radioactive pollution from nuclear surface ships and submarines, and in particular in enclosed and semi-enclosed seas, under appropriate controls and particularly to complete elimination of deliberate pollution by oil from ships, with the goal of achieving this by the middle of the present decade;

(*f*) Strengthen national controls over land-based sources of marine pollution, in particular in enclosed and semi-enclosed seas, and recognize that, in some circumstances, the discharge of residual heat from nuclear and other power-stations may constitute a potential hazard to marine ecosystems.

Recommendation 87

It is recommended that Governments:

(*a*) Support national research and monitoring efforts that contribute to agreed international programmes for research and monitoring in the marine environment, in particular the Global Investigation of Pollution in the Marine Environment (GIPME) and the Integrated Global Ocean Station System (IGOSS);

(*b*) Provide to the United Nations, the Food and Agriculture Organization of the United Nations and the United Nations Conference on Trade and Development, as appropriate to the data-gathering activities of each, statistics on the production and use of toxic or dangerous substances that are potential marine pollutants, especially if they are persistent;

(*c*) Expand their support to components of the United Nations system concerned with research and monitoring in the marine environment and adopt the measures required to improve the constitutional, financial and operational basis under which the Intergovernmental Oceanographic Commission is at present operating so as to make it an effective joint mechanism for the Governments and United Nations organizations concerned (United Nations Educational, Scientific and Cultural Organization, Food and Agriculture Organization of the United Nations, World Meteorological Organization, Inter-Governmental Maritime Consultative Organization, United Nations) and in order that it may be able to take on additional responsibilities for the promotion and co-ordination of scientific programmes and services.

Recommendation 88

It is recommended that the Secretary-General, together with the sponsoring agencies, make it possible for the Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP):

(*a*) To re-examine annually, and revise as required, its "Review of Harmful Chemical Substances", with a view to elaborating further its assessment of sources, pathways and resulting risks of marine pollutants;

(*b*) To assemble, having regard to other work in progress, scientific data and to provide advice on scientific aspects of marine pollution, especially those of an interdisciplinary nature.

Recommendation 89

It is recommended that the Secretary-General ensure:

(*a*) That mechanisms for combining world statistics on mining, production, processing, transport and use of potential marine pollutants shall be developed along with methods for identifying high-priority marine pollutants based in part on such data;

(*b*) That the Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP), in consultation with other expert groups, propose guidelines for test programmes to evaluate toxicity of potential marine pollutants;

(*c*) That the Food and Agriculture Organization of the United Nations, the World Health Organization, the Intergovernmental Oceanographic Commission and the International Atomic Energy Agency encourage studies of the effects of high-priority marine pollutants on man and other organisms, with appropriate emphasis on chronic, low-level exposures;

(*d*) That the Intergovernmental Oceanographic Commission, with the Food and Agriculture Organization of the United Nations and the World Health Organization, explore the possibility of establishing an international institute for tropical marine studies, which would undertake training as well as research.

Recommendation 90

It is recommended that the Intergovernmental Oceanographic Commission, jointly with the World Meteorological Organization and, as appropriate, in co-operation with other interested intergovernmental bodies, promote the monitoring of marine pollution, preferably within the framework of the Integrated Global Ocean Station System (IGOSS), as well as the development of methods for monitoring high-priority marine pollutants in the water, sediments and organisms, with advice from the Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP) on intercomparability of methodologies.

Recommendation 91

It is recommended that the Intergovernmental Oceanographic Commission:

(*a*) Ensure that provision shall be made in international marine research, monitoring and related activities for the exchange, dissemination, and referral to sources of data and information on baselines and on marine pollution and that attention shall be paid to the special needs of developing countries;

(*b*) Give full consideration, with the Food and Agriculture Organization of the United Nations, the World Meteorological Organization, the Inter-Governmental Maritime Consultative Organization, the World Health Organization, the International Atomic Energy Agency, the International Hydrographic Organization and the International Council for the Exploration of the Sea and other interested and relevant organizations, to the strengthening of on-going marine and related data and information exchange and dissemination activities;

(*c*) Support the concept of development of an interdisciplinary and interorganizational system primarily involving centres already in existence;

(*d*) Initiate an interdisciplinary marine pollution data and scientific information referral capability.

Recommendation 92

It is recommended:

(*a*) That Governments collectively endorse the principles set forth in paragraph 197 of Conference document A/CONF.48/8 [4] as guiding concepts for the Conference on the Law of the Sea and the Inter-Governmental Maritime Consultative Organization (IMCO) Marine Pollution Conference scheduled to be held in 1973 and also the statement of objectives agreed on at the second session of the Intergovernmental Working Group on Marine Pollution, which reads as follows:

> "The marine environment and all the living organisms which it supports are of vital importance to humanity, and all people have an interest in assuring that this environment is so managed that its quality and resources are not impaired. This applies especially to coastal nations, which have a particular interest in the management of coastal area resources. The capacity of the sea to assimilate wastes and render them harmless and its ability to regenerate natural resources are not unlimited. Proper management is required and measures to prevent and control marine pollution must be regarded as an essential element in this management of the oceans and seas and their natural resources";

and that, in respect of the particular interest of coastal States in the marine environment and recognizing that the resolution of this question is a matter for consideration at the Conference on the Law of the Sea, they take note of the principles on the rights of coastal States discussed but neither endorsed nor rejected at the second session of the Intergovernmental Working Group on Marine Pollution and refer those principles to the 1973 Inter-Governmental Maritime Consultative Organization Conference for information and to the 1973 Conference on the Law of the Sea for such action as may be appropriate;

(*b*) That Governments take early action to adopt effective national measures for the control of all significant sources of marine pollution, including land-based sources, and concert and co-ordinate their actions regionally and where appropriate on a wider international basis;

(*c*) That the Secretary-General, in co-operation with appropriate international organizations, endeavour to provide guidelines which Governments might wish to take into account when developing such measures.

Recommendation 93

It is recommended that any mechanism for co-ordinating and stimulating the actions of the different United Nations

[4] See annex III.

organs in connexion with environmental problems include among its functions over-all responsibility for ensuring that needed advice on marine pollution problems shall be provided to Governments.

Recommendation 94

It is recommended that the Secretary-General, with the co-operation of United Nations bodies, take steps to secure additional financial support to those training and other programmes of assistance that contribute to increasing the capacity of developing countries to participate in international research, monitoring and pollution-control programmes.

EDUCATIONAL, INFORMATIONAL, SOCIAL AND CULTURAL ASPECTS OF ENVIRONMENTAL ISSUES

Recommendation 95

It is recommended that the Secretary-General make arrangements for the United Nations system:

(*a*) To provide countries on request with the necessary technical and financial assistance in preparing national reports on the environment, in setting up machinery for monitoring environmental developments from the social and cultural standpoint and, in particular, in drawing up national social, educational and cultural programmes;

(*b*) To support and encourage projects for continuing co-operation among national social, educational and cultural programmes, including their economic aspects, in an international network. The organizations of the United Nations system, including the regional economic commissions and the United Nations Economic Social Office in Beirut, will be called upon to participate in this activity, as will other international governmental and non-governmental agencies;

(*c*) To organize the exchange of information on experience, methods and work in progress in connexion with continuous social diagnosis, particularly at the regional level and between regions with common problems;

(*d*) To facilitate the development of social and cultural indicators for the environment, in order to establish a common methodology for assessing environmental developments and preparing reports on the subject;

(*e*) To prepare, on the basis of the national reports on the state of, and outlook for, the environment, periodic reports on regional or subregional situations and on the international situation in this matter.

The activities described above could be co-ordinated by the new bodies for environmental co-ordination, taking into account the priorities agreed upon according to the resources available. International bodies responsible for technical and financial co-operation and assistance could also help in carrying out these tasks.

Recommendation 96

1. *It is recommended* that the Secretary-General, the organizations of the United Nations system, especially the United Nations Educational, Scientific and Cultural Organization, and the other international agencies concerned, should, after consultation and agreement, take the necessary steps to establish an international programme in environmental education, interdisciplinary in approach, in school and out of school, encompassing all levels of education and directed towards the general public, in particular the ordinary citizen living in rural and urban areas, youth and adult alike, with a view to educating him as to the simple steps he might take, within his means, to manage and control his environment. A programme of technical and financial co-operation and assistance will be needed to support this programme, taking into account the priorities agreed upon according to the resources available. This programme should include, among other things:

(*a*) The preparation of an inventory of existing systems of education which include environmental education;

(*b*) The exchange of information on such systems and, in particular, dissemination of the results of experiments in teaching;

(*c*) The training and retraining of professional workers in various disciplines at various levels (including teacher training);

(*d*) Consideration of the formation of groups of experts in environmental disciplines and activities, including those concerning the economic, sociological, tourist and other sectors, in order to facilitate the exchange of experience between countries which have similar environmental conditions and comparable levels of development;

(*e*) The development and testing of new materials and methods for all types and levels of environmental education.

2. *It is further recommended* that United Nations Educational, Scientific and Cultural Organization, under the Man and the Biosphere Programme, the World Health Organization, the Food and Agriculture Organization of the United Nations, the United Nations Industrial Development Organization, the World Meteorological Organization and all the organizations concerned, including the scientific unions co-ordinated by the International Council of Scientific Unions, should develop their activities in studying desirable innovations in the training of specialists and technicians and, in collaboration with the United Nations Development Programme, should encourage the institution, at the regional and the international level, of courses and training periods devoted to the environment.

3. *It is further recommended* that international organizations for voluntary service, and, in particular, the International Secretariat for Volunteer Service, should include environmental skills in the services they provide, in consultation with the United Nations Development Programme through the United Nations Volunteer Programme.

Recommendation 97

1. *It is recommended* that the Secretary-General make arrangements:

(*a*) To establish an information programme designed to create the awareness which individuals should have

of environmental issues and to associate the public with environmental management and control. This programme will use traditional and contemporary mass media of communication, taking distinctive national conditions into account. In addition, the programme must provide means of stimulating active participation by the citizens, and of eliciting interest and contributions from non-governmental organizations for the preservation and development of the environment;

(*b*) To institute the observance of a World Environment Day;

(*c*) For the preparatory documents and official documents of the Conference to be translated into the widest possible range of languages and circulated as widely as possible;

(*d*) To integrate relevant information on the environment in all its various aspects into the activities of the information organs of the United Nations system;

(*e*) To develop technical co-operation, particularly through and between the United Nations regional economic commissions and the United Nations Economic and Social Office in Beirut.

2. *It is also recommended* that the Secretary-General and the development agencies make arrangements to use and adapt certain international development programmes—provided that this can be done without delaying their execution—so as to improve the dissemination of information and to strengthen community action on environment problems, especially among the oppressed and underprivileged peoples of the earth.

Recommendation 98

It is recommended that Governments, with the assistance of the Secretary-General, the Food and Agriculture Organization of the United Nations, the United Nations Educational Scientific and Cultural Organization and the other international and regional intergovernmental and non-governmental agencies concerned, should continue the preparation of the present and future conventions required for the conservation of the world's natural resources and cultural heritage. In the course of this preparatory work, Governments should consider the possibility of putting into operation systems of protection for elements of the world heritage, under which those Governments that wish to save elements of their national heritage of universal value would be able to obtain from the international community, on request, the technical and financial assistance required to bring their efforts to fruition.

Recommendation 99

1. *It is recommended* that Governments should:

(*a*) Noting that the draft convention prepared by United Nations Educational, Scientific and Cultural Organization concerning the protection of the world natural and cultural heritage marks a significant step towards the protection, on an international scale, of the environment, examine this draft convention with a view to its adoption at the next General Conference of UNESCO;

(*b*) Whenever appropriate, sign the Convention on Conservation of Wetlands of International Importance;

2. *It is recommended* that the Secretary-General, in consultation with the competent agencies of the United Nations system and the non-governmental organizations concerned, make arrangements for a detailed study of all possible procedures for protecting certain islands for science;

3. *It is recommended* that a plenipotentiary conference be convened as soon as possible, under appropriate governmental or intergovernmental auspices, to prepare and adopt a convention on export, import and transit of certain species of wild animals and plants.

Recommendation 100

It is recommended that the Secretary-General make arrangements:

(*a*) To be kept informed of national pilot schemes for new forms of environmental management;

(*b*) To assist countries, on request, with their research and experiments;

(*c*) To organize the international exchange of information collected on this subject.

Recommendation 101

It is recommended that the Secretary-General take the appropriate steps, including the convening of an expert meeting, to organize an International Referral Service for sources of environmental information, taking into account the model described in paragraphs 129 to 136 of the report on educational, informational, social and cultural aspects of environmental issues (A/CONF.48/9), in order to assist in the successful implementation of all the recommendations made in respect of those aspects of environmental issues and of most of the recommendations envisaged in the other substantive subject areas covered in the Conference agenda.

DEVELOPMENT AND ENVIRONMENT

Recommendation 102

It is recommended that the appropriate regional organizations give full consideration to the following steps:

(*a*) Preparing short-term and long-term plans at regional, subregional and sectoral levels for the study and identification of the major environmental problems faced by the countries of the region concerned as well as the special problems of the least developed countries of the region and of countries with coastlines and inland lakes and rivers exposed to the risk of marine and other forms of pollution;

(*b*) Evaluating the administrative, technical and legal solutions to various environmental problems in terms of both preventive and remedial measures, taking into account possible alternative and/or multidisciplinary approaches to development;

(*c*) Preparation, within the framework of international agreements, of legislative measures designed to protect marine (and fresh-water) fisheries resources within the limits of their national jurisdiction;

(*d*) Increasing and facilitating, in the context of development and as proposed in the World Plan of Action for the Application of Science and Technology to Development, the acquisition and distribution of information and experience to member countries through global and regional co-operation, with particular emphasis on an international information referral networks approach and on a regular exchange of information and observation among the regional organizations;

(*e*) Establishing facilities for the exchange of information and experience between less industrialized countries which, although situated in different regions, share similar problems as a result of common physical, climatic and other factors;

(*f*) Encouraging the training of personnel in the techniques of incorporating environmental considerations into developmental planning, and of identifying and analysing the economic and social cost-benefit relationships of alternative approaches;

(*g*) Establishing criteria, concepts and a terminology of the human environment through interdisciplinary efforts;

(*h*) Establishing and disseminating information on the significant environmental problems of each region and the nature and result of steps taken to cope with them;

(*i*) Providing and co-ordinating technical assistance activities directed towards establishing systems of environmental research, information and analysis at the national level;

(*j*) Assisting developing countries, in co-operation with appropriate international agencies, in promoting elementary education, with emphasis on hygiene, and in developing and applying suitable methods for improving health, housing, sanitation and water supply, and controlling soil erosion. Emphasis should be placed on techniques promoting the use of local labour and utilizing local materials and local expertise in environmental management;

(*k*) Encouraging the appropriate agencies and bodies within the United Nations to assist the developing countries, at their request, in establishing national science, technology and research policies to enable the developing countries to acquire the capacity to identify and combat environmental problems in the early planning and development stages. In this respect, special priority should be accorded to the type of research, technology and science which would help developing countries speed up, without adverse environment effects, the exploration, exploitation, processing and marketing of their natural resources.

Recommendation 103

It is recommended that Governments take the necessary steps to ensure:

(*a*) That all States participating in the Conference agree not to invoke environmental concerns as a pretext for discriminatory trade policies or for reduced access to markets and recognize further that the burdens of the environmental policies of the industrialized countries should not be transferred, either directly or indirectly, to the developing countries. As a general rule, no country should solve or disregard its environmental problems at the expense of other countries;

(*b*) That where environmental concerns lead to restrictions on trade, or to stricter environmental standards with negative effects on exports, particularly from developing countries, appropriate measures for compensation should be worked out within the framework of existing contractual and institutional arrangements and any new such arrangements that can be worked out in the future;

(*c*) That the General Agreement of Tariffs and Trade, among other international organizations, could be used for the examination of the problems, specifically through the recently established Group on Environmental Measures and International Trade and through its general procedures for bilateral and multilateral adjustment of differences;

(*d*) That whenever possible (that is, in cases which do not require immediate discontinuation of imports), countries should inform their trading partners in advance about the intended action in order that there might be an opportunity to consult within the GATT Group on Environment Measures and International Trade, among other international organizations. Assistance in meeting the consequences of stricter environmental standards ought to be given in the form of financial or technical assistance for research with a view to removing the obstacles that the products of developing countries have encountered;

(*e*) That all countries agree that uniform environmental standards should not be expected to be applied universally by all countries with respect to given industrial processes or products except in those cases where environmental disruption may constitute a concern to other countries. In addition, in order to avoid an impairment of the access of the developing countries to the markets of the industrialized countries because of differential product standards, Governments should aim at world-wide harmonization of such standards. Environmental standards should be established, at whatever levels are necessary, to safeguard the environment, and should not be directed towards gaining trade advantages;

(*f*) That the Governments and the competent international organizations keep a close watch on medium- and long-term trends in international trade and take measures with a view to promoting:

(i) The exchange of environmental protection technologies;

(ii) International trade in natural products and commodities which compete with synthetic products that have a greater capacity for pollution.

Recommendation 104

It is recommended that the Secretary-General ensure:

(*a*) That appropriate steps shall be taken by the existing United Nations organizations to identify the major threats to exports, particularly those of developing countries, that arise from environmental concerns, their character and severity, and the remedial action that may be envisaged;

(*b*) That the United Nations system, in co-operation with other governmental and non-governmental agencies working in this field, should assist Governments to develop mutually acceptable common international environmental standards on products which are considered by Governments to be of significance in foreign trade. Testing and certification procedures designed to ensure that the products conform to these standards should be such as to avoid arbitrary and discriminatory actions that might affect the trade of developing countries.

Recommendation 105

It is recommended that the General Agreement of Tariffs and Trade, the United Nations Conference on Trade and Development and other international bodies, as appropriate, should, within their respective fields of competence, consider undertaking to monitor, assess, and regularly report the emergence of tariff and non-tariff barriers to trade as a result of environmental policies.

Recommendation 106

It is recommended:

(*a*) That the Secretary-General, in co-operation with other international bodies as appropriate, should examine the extent to which the problems of pollution could be ameliorated by a reduction in the current levels of production and in the future rate of growth of the production of synthetic products and substitutes which, in their natural form, could be produced by developing countries; and make recommendations for national and international action;

(*b*) That Governments of the developing countries consider fully the new opportunities that may be offered to them to establish industries and/or expand existing industries in which they may have comparative advantages because of environmental considerations, and that special care be taken to apply the appropriate international standards on environment in order to avoid the creation of pollution problems in developing countries;

(*c*) That the Secretary-General, in consultation with appropriate international agencies, undertake a full review of the practical implications of environmental concerns in relation to distribution of future industrial capacity and, in particular, to ways in which the developing countries may be assisted to take advantage of opportunities and to minimize risks in this area.

Recommendation 107

It is recommended that the Secretary-General, in collaboration with appropriate international agencies, ensure that a study be conducted of appropriate mechanisms for financing international environmental action, taking into account General Assembly resolution 2849 (XXVI).

Recommendation 108

It is being recognized that it is in the interest of mankind that the technologies for protecting and improving the environment be employed universally, *it is recommended* that the Secretary-General be asked to undertake studies, in consultation with Governments and appropriate international agencies, to find means by which environmental technologies may be made available for adoption by developing countries under terms and conditions that encourage their wide distribution without constituting an unacceptable burden to developing countries.

Recommendation 109

It is recommended that the Secretary-General, in collaboration with appropriate international agencies, take steps to ensure that the environmental considerations of an international nature related to the foregoing recommendations be integrated into the review and appraisal of the International Development Strategy for the Second Development Decade in such a way that the flow of international aid to developing countries is not hampered. Recommendations for national action, proposed by the Secretary-General of the Conference, shall be referred to Governments for their consideration and, when deemed appropriate, should be taken into account in the review and appraisal process during the consideration of matters for national action as included in the International Development Strategy. It should further be ensured that the preoccupation of developed countries with their own environmental problems should not affect the flow of assistance to developing countries, and that this flow should be adequate to meet the additional environmental requirements of such countries.

C. The Action Plan

All of the recommendations approved by the Conference for action at the international level (see section B above) are rearranged in the following Action Plan for the Human Environment within the approved framework (see section A above). The recommendations which, before and during the Conference, had been dealt with sectorally, by subject area, are redistributed below, according to function, into the three components of the Action Plan: the global environmental assessment programme (Earthwatch), the environmental management activities, and the supporting measures.

Environmental assessment (Earthwatch)

This category includes the functions listed below:

Evaluation and review: to provide the basis for identification of the knowledge needed and to determine that the necessary steps be taken:

Recommendations: 4, 11, 14, 18, 21, 30, 41, 44, 46 (c, d), 48, 49, 54, 55, 60, 61, 63, 70, 74, 75, 81, 85, 88, 91 (a), 92 (c), 93, 94, 95 (d, e), 106, 109.

Research: to create new knowledge of the kinds specifically needed to provide guidance in the making of decisions:

Recommendations: 4, 12, 13, 16 (b), 18 (c), 20 (b, c), 21, 23, 24 (a, b), 26, 28, 41, 42, 43 (5. b, c), 45 (2. b), 48, 49, 51 (c), 52, 53 (d), 59, 62, 64, 65, 66, 68, 73, 74 (d), 76, 78, 79 (d), 80 (a-c), 84, 85, 87, 88, 89, 94, 95 (d), 102 (a. i), 106 (c), 108.

Monitoring: to gather certain data on specific environmental variables and to evaluate such data in order to

determine and predict important environmental conditions and trends:

Recommendations: 18 (1. a-e), 20 (a. iv), 25, 29, 30, 40, 45, 46 (a-c), 49, 51 (c. i, ii), 52 (1. c), 55, 57, 67, 73, 74, 76, 77, 78, 79, 80, 87, 90, 91, 94, 95, 102, 104, 105, 108.

Information exchange: to disseminate knowledge within the scientific and technological communities and to ensure that decision-makers at all levels shall have the benefit of the best knowledge that can be made available in the forms and at the times in which it can be useful:

Recommendations: 2, 4, 5, 16 (c), 19 (a), 20 (a, c), 21 (a), 26, 27, 35, 37, 39, 41, 45, 46 (b), 49, 51 (c), 52, 53 (c), 54, 55, 56, 57, 58, 59, 73, 74 (b), 84, 91, 95 (c), 96 (b), 97, 100 (c), 101, 102 (d, e, h, i), 108.

Environmental management

This category covers functions designed to facilitate comprehensive planning that takes into account the side effects of man's activities and thereby to protect and enhance the human environment for present and future generations.

Recommendations: 1, 2, 3, 9, 10, 12, 13, 14, 15, 17, 18 (3, 4), 19, 20 (d), 21, 22, 23, 27, 32, 33, 36, 37, 38, 39, 42, 43, 44, 45, 46, 47, 48, 50, 51, 52, 53, 54, 55, 61, 63, 68, 69, 70, 71, 72, 75 (b), 81, 82, 83, 84, 85, 86, 88, 92, 93, 94, 96 (b), 98, 99, 100 (a), 102, 103, 104, 105, 106, 107, 108, 109.

Supporting measures

This category relates to measures required for the activities in the other two categories (environmental assessment and environmental management).

Education, training and public information: to supply needed specialists, multidisciplinary professionals and technical personnel and to facilitate the use of knowledge in decision-making at every level.

Recommendations: 6, 7, 8, 13, 16, 18 (4), 19 (b), 31, 34, 73, 89 (d), 93, 94, 95 (e), 96, 97, 102 (f).

Organizational arrangements:

Recommendations: 4 (1), 7 (b), 16, 18, 20 (b. iii), 21 (a. vi), 23, 26, 31 (b), 33, 34 (b), 41, 43 (2, 6, 7), 45, 49, 50, 51, 52 (2), 79, 85, 87 (c), 89 (d), 91, 93, 94, 101, 102 (e).

Financial and other forms of assistance:

Recommendations: 1, 2 (1. c), 10, 12, 13, 15, 16 (d), 18 (2, 4), 19 (b), 21 (a), 34 (b), 36, 43 (b), 45, 46 (d), 49, 50, 51 (c. viii), 53, 73, 74, 77, 85 (d), 93, 94, 95, 96, 97 (1. e, 2), 98, 100 (b), 102 (i, j, k), 107, 108.

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Rio de Janeiro, 3–14 June 1992

Volume I

Resolutions Adopted by the Conference

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NOTE

Symbols of United Nations documents are composed of capital letters combined with figures.

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CONTENTS

		Page
Resolution 1.	Adoption of texts on environment and development	2

Annexes

I.	Rio Declaration on Environment and Development	3
II.	Agenda 21	9
III.	Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests	480
Resolution 2.	Expression of thanks to the people and Government of Brazil	486
Resolution 3.	Credentials of representatives to the Conference	486

ABBREVIATIONS

APELL	Awareness and Preparedness for Industrial Accidents at Local Level
CFC	chlorofluorocarbon
CGIAR	Consultative Group on International Agricultural Research
CILSS	Permanent Inter-State Committee on Drought Control in the Sahel
EEZ	exclusive economic zone
ECA	Economic Commission for Africa
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
ELCI	Environmental Liaison Centre International
EMINWA	environmentally sound management of inland water
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
FAO	Food and Agriculture Organization of the United Nations
GATT	General Agreement on Tariffs and Trade
GAW	Global Atmosphere Watch (WMO)
GEF	Global Environment Facility
GEMS	Global Environmental Monitoring System (UNEP)
GEMS/WATER	Global Water Quality Monitoring Programme
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Pollution
GIPME	Global Investigation of Pollution in the Marine Environment (UNESCO)
GIS	Geographical Information System
GLOBE	Global Legislators Organisation for a Balanced Environment
GOS	Global Observing System (WMO/WWW)
GRID	Global Resource Information Database
GSP	generalized system of preferences
HIV	human immunodeficiency virus
IAEA	International Atomic Energy Agency
IAP-WASAD	International Action Programme on Water and Sustainable Agricultural Development
IARC	International Agency for Research on Cancer
IBSRAM	International Board of Soil Resources and Management
ICCA	International Council of Chemical Associations
ICES	International Council for the Exploration of the Sea
ICPIC	International Cleaner Production Information Clearing House
ICSC	International Civil Service Commission
ICSU	International Council of Scientific Unions
IEEA	integrated environmental and economic accounting
IFAD	International Fund for Agricultural Development
IGADD	Intergovernmental Authority for Drought and Development
IGBP	International Geosphere-Biosphere Programme (ICSU)
IGBP/START	International Geosphere-Biosphere Programme/Global Change System for Analysis, Research and Training
ILO	International Labour Organisation
IMF	International Monetary Fund

IMO	International Maritime Organization
INFOTERRA	International Environment Information System (UNEP)
IOC	Intergovernmental Oceanographic Commission
IPCC	Intergovernmental Panel on Climate Change
IPCS	International Programme on Chemical Safety
IPM	integrated pest management
IRPTC	International Register of Potentially Toxic Chemicals
ITC	International Tin Council
ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature and Natural Resources
MARPOL	International Convention for the Prevention of Pollution from Ships
OECD	Organisation for Economic Cooperation and Development
PGRFA	plant genetic resources for agriculture
PIC	prior informed consent procedure
SADCC	Southern African Development Coordination Conference
SARD	sustainable agriculture and rural development
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNDRO	Office of the United Nations Disaster Relief Coordinator
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UNU	United Nations University
WCP	World Climate Programme (WMO/UNEP/ICSU/UNESCO)
WFC	World Food Council
WHO	World Health Organization
WMO	World Meteorological Organization
WWF	World Wild Fund for Nature (also called World Wildlife Fund)
WWW	World Weather Watch (WMO)

At its 19th plenary meeting, on 14 June 1992, the Conference adopted the Rio Declaration on Environment and Development, Agenda 21 and the Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests (resolution 1). It also adopted a resolution expressing thanks to the people and Government of Brazil (resolution 2) and a resolution concerning the credentials of representatives to the Conference (resolution 3).

RESOLUTION 1

Adoption of texts on environment and development

The United Nations Conference on Environment and Development,

Having met at Rio de Janeiro from 3 to 14 June 1992,

1. Notes that the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity were opened for signature at the United Nations Conference on Environment and Development and were signed at Rio de Janeiro by 154 States and one regional economic integration organization and 156 States and one regional economic integration organization respectively;

2. Adopts the Rio Declaration on Environment and Development, Agenda 21 and the Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests, which are annexed to the present resolution;

3. Recommends to the General Assembly of the United Nations at its forty-seventh session that it endorse the texts referred to in paragraph 2 above, as adopted.

Annex I

RIO DECLARATION ON ENVIRONMENT AND DEVELOPMENT

The United Nations Conference on Environment and Development,

Having met at Rio de Janeiro from 3 to 14 June 1992,

Reaffirming the Declaration of the United Nations Conference on the Human Environment, adopted at Stockholm on 16 June 1972, a/ and seeking to build upon it,

With the goal of establishing a new and equitable global partnership through the creation of new levels of cooperation among States, key sectors of societies and people,

Working towards international agreements which respect the interests of all and protect the integrity of the global environmental and developmental system,

Recognizing the integral and interdependent nature of the Earth, our home,

Proclaims that:

Principle 1

Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.

Principle 2

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

Principle 3

The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.

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a/ Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972 (United Nations publication, Sales No. E.73.II.A.14 and corrigendum), chap. I.

Principle 4

In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.

Principle 5

All States and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the disparities in standards of living and better meet the needs of the majority of the people of the world.

Principle 6

The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority. International actions in the field of environment and development should also address the interests and needs of all countries.

Principle 7

States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.

Principle 8

To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.

Principle 9

States should cooperate to strengthen endogenous capacity-building for sustainable development by improving scientific understanding through exchanges of scientific and technological knowledge, and by enhancing the development, adaptation, diffusion and transfer of technologies, including new and innovative technologies.

Principle 10

Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Principle 11

States shall enact effective environmental legislation. Environmental standards, management objectives and priorities should reflect the environmental and developmental context to which they apply. Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries.

Principle 12

States should cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation. Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade. Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing transboundary or global environmental problems should, as far as possible, be based on an international consensus.

Principle 13

States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also cooperate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction.

Principle 14

States should effectively cooperate to discourage or prevent the relocation and transfer to other States of any activities and substances that cause severe environmental degradation or are found to be harmful to human health.

Principle 15

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

Principle 16

National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.

Principle 17

Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

Principle 18

States shall immediately notify other States of any natural disasters or other emergencies that are likely to produce sudden harmful effects on the environment of those States. Every effort shall be made by the international community to help States so afflicted.

Principle 19

States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith.

Principle 20

Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development.

Principle 21

The creativity, ideals and courage of the youth of the world should be mobilized to forge a global partnership in order to achieve sustainable development and ensure a better future for all.

Principle 22

Indigenous people and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.

Principle 23

The environment and natural resources of people under oppression, domination and occupation shall be protected.

Principle 24

Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary.

Principle 25

Peace, development and environmental protection are interdependent and indivisible.

Principle 26

States shall resolve all their environmental disputes peacefully and by appropriate means in accordance with the Charter of the United Nations.

Principle 27

States and people shall cooperate in good faith and in a spirit of partnership in the fulfilment of the principles embodied in this Declaration and in the further development of international law in the field of sustainable development.

Annex II

AGENDA 21

CONTENTS

Chapter		Paragraphs	Page
1.	Preamble	1.1 - 1.6	12
	SECTION I. SOCIAL AND ECONOMIC DIMENSIONS		
2.	International cooperation to accelerate sustainable development in developing countries and related domestic policies	2.1 - 2.43	14
3.	Combating poverty	3.1 - 3.12	28
4.	Changing consumption patterns	4.1 - 4.27	34
5.	Demographic dynamics and sustainability	5.1 - 5.66	40
6.	Protecting and promoting human health	6.1 - 6.46	51
7.	Promoting sustainable human settlement development ..	7.1 - 7.80	70
8.	Integrating environment and development in decision-making	8.1 - 8.54	95
	SECTION II. CONSERVATION AND MANAGEMENT OF RESOURCES FOR DEVELOPMENT		
9.	Protection of the atmosphere	9.1 - 9.35	111
10.	Integrated approach to the planning and management of land resources	10.1 - 10.18	124
11.	Combating deforestation	11.1 - 11.40	131
12.	Managing fragile ecosystems: combating desertification and drought	12.1 - 12.63	149
13.	Managing fragile ecosystems: sustainable mountain development	13.1 - 13.24	169
14.	Promoting sustainable agriculture and rural development	14.1 - 14.104	178
15.	Conservation of biological diversity	15.1 - 15.11	210
16.	Environmentally sound management of biotechnology ...	16.1 - 16.46	218

Chapter		Paragraphs	Page
17.	Protection of the oceans, all kinds of seas, including enclosed and semi-enclosed seas, and coastal areas and the protection, rational use and development of their living resources	17.1 - 17.137	238
18.	Protection of the quality and supply of freshwater resources: application of integrated approaches to the development, management and use of water resources	18.1 - 18.90	275
19.	Environmentally sound management of toxic chemicals, including prevention of illegal international traffic in toxic and dangerous products	19.1 - 19.76	315
20.	Environmentally sound management of hazardous wastes, including prevention of illegal international traffic in hazardous wastes	20.1 - 20.46	335
21.	Environmentally sound management of solid wastes and sewage-related issues	21.1 - 21.49	353
22.	Safe and environmentally sound management of radioactive wastes	22.1 - 22.9	370
	SECTION III. STRENGTHENING THE ROLE OF MAJOR GROUPS		
23.	Preamble	23.1 - 23.4	373
24.	Global action for women towards sustainable and equitable development	24.1 - 24.12	374
25.	Children and youth in sustainable development	25.1 - 25.17	380
26.	Recognizing and strengthening the role of indigenous people and their communities	26.1 - 26.9	385
27.	Strengthening the role of non-governmental organizations: partners for sustainable development	27.1 - 27.13	389
28.	Local authorities' initiatives in support of Agenda 21	28.1 - 28.7	393
29.	Strengthening the role of workers and their trade unions	29.1 - 29.14	395
30.	Strengthening the role of business and industry	30.1 - 30.30	398
31.	Scientific and technological community	31.1 - 31.12	403
32.	Strengthening the role of farmers	32.1 - 32.14	408

CONTENTS (continued)

Chapter		Paragraphs	Page
	SECTION IV. MEANS OF IMPLEMENTATION		
33.	Financial resources and mechanisms	33.1 - 33.21	412
34.	Transfer of environmentally sound technology, cooperation and capacity-building	34.1 - 34.29	418
35.	Science for sustainable development	35.1 - 35.25	426
36.	Promoting education, public awareness and training ..	36.1 - 36.27	439
37.	National mechanisms and international cooperation for capacity-building in developing countries	37.1 - 37.13	450
38.	International institutional arrangements	38.1 - 38.45	456
39.	International legal instruments and mechanisms	39.1 - 39.10	469
40.	Information for decision-making	40.1 - 40.30	473

Chapter 1

PREAMBLE*

1.1. Humanity stands at a defining moment in history. We are confronted with a perpetuation of disparities between and within nations, a worsening of poverty, hunger, ill health and illiteracy, and the continuing deterioration of the ecosystems on which we depend for our well-being. However, integration of environment and development concerns and greater attention to them will lead to the fulfilment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future. No nation can achieve this on its own; but together we can - in a global partnership for sustainable development.

1.2. This global partnership must build on the premises of General Assembly resolution 44/228 of 22 December 1989, which was adopted when the nations of the world called for the United Nations Conference on Environment and Development, and on the acceptance of the need to take a balanced and integrated approach to environment and development questions.

1.3. Agenda 21 addresses the pressing problems of today and also aims at preparing the world for the challenges of the next century. It reflects a global consensus and political commitment at the highest level on development and environment cooperation. Its successful implementation is first and foremost the responsibility of Governments. National strategies, plans, policies and processes are crucial in achieving this. International cooperation should support and supplement such national efforts. In this context, the United Nations system has a key role to play. Other international, regional and subregional organizations are also called upon to contribute to this effort. The broadest public participation and the active involvement of the non-governmental organizations and other groups should also be encouraged.

1.4. The developmental and environmental objectives of Agenda 21 will require a substantial flow of new and additional financial resources to developing countries, in order to cover the incremental costs for the actions they have to undertake to deal with global environmental problems and to accelerate sustainable development. Financial resources are also required for strengthening the capacity of international institutions for the implementation of Agenda 21. An indicative order-of-magnitude assessment of costs is included in each of the programme areas. This assessment will need

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* When the term "Governments" is used, it will be deemed to include the European Economic Community within its areas of competence. Throughout Agenda 21 the term "environmentally sound" means "environmentally safe and sound", in particular when applied to the terms "energy sources", "energy supplies", "energy systems" and "technology" or "technologies".

to be examined and refined by the relevant implementing agencies and organizations.

1.5. In the implementation of the relevant programme areas identified in Agenda 21, special attention should be given to the particular circumstances facing the economies in transition. It must also be recognized that these countries are facing unprecedented challenges in transforming their economies, in some cases in the midst of considerable social and political tension.

1.6. The programme areas that constitute Agenda 21 are described in terms of the basis for action, objectives, activities and means of implementation. Agenda 21 is a dynamic programme. It will be carried out by the various actors according to the different situations, capacities and priorities of countries and regions in full respect of all the principles contained in the Rio Declaration on Environment and Development. It could evolve over time in the light of changing needs and circumstances. This process marks the beginning of a new global partnership for sustainable development.

Chapter 2

INTERNATIONAL COOPERATION TO ACCELERATE SUSTAINABLE DEVELOPMENT IN DEVELOPING COUNTRIES AND RELATED DOMESTIC POLICIES

INTRODUCTION

2.1. In order to meet the challenges of environment and development, States have decided to establish a new global partnership. This partnership commits all States to engage in a continuous and constructive dialogue, inspired by the need to achieve a more efficient and equitable world economy, keeping in view the increasing interdependence of the community of nations and that sustainable development should become a priority item on the agenda of the international community. It is recognized that, for the success of this new partnership, it is important to overcome confrontation and to foster a climate of genuine cooperation and solidarity. It is equally important to strengthen national and international policies and multinational cooperation to adapt to the new realities.

2.2. Economic policies of individual countries and international economic relations both have great relevance to sustainable development. The reactivation and acceleration of development requires both a dynamic and a supportive international economic environment and determined policies at the national level. It will be frustrated in the absence of either of these requirements. A supportive external economic environment is crucial. The development process will not gather momentum if the global economy lacks dynamism and stability and is beset with uncertainties. Neither will it gather momentum if the developing countries are weighted down by external indebtedness, if development finance is inadequate, if barriers restrict access to markets and if commodity prices and the terms of trade of developing countries remain depressed. The record of the 1980s was essentially negative on each of these counts and needs to be reversed. The policies and measures needed to create an international environment that is strongly supportive of national development efforts are thus vital. International cooperation in this area should be designed to complement and support - not to diminish or subsume - sound domestic economic policies, in both developed and developing countries, if global progress towards sustainable development is to be achieved.

2.3. The international economy should provide a supportive international climate for achieving environment and development goals by:

(a) Promoting sustainable development through trade liberalization;

(b) Making trade and environment mutually supportive;

(c) Providing adequate financial resources to developing countries and dealing with international debt;

(d) Encouraging macroeconomic policies conducive to environment and development.

2.4. Governments recognize that there is a new global effort to relate the elements of the international economic system and mankind's need for a safe and stable natural environment. Therefore, it is the intent of Governments that consensus-building at the intersection of the environmental and trade and development areas will be ongoing in existing international forums, as well as in the domestic policy of each country.

PROGRAMME AREAS

A. Promoting sustainable development through trade

Basis for action

2.5. An open, equitable, secure, non-discriminatory and predictable multilateral trading system that is consistent with the goals of sustainable development and leads to the optimal distribution of global production in accordance with comparative advantage is of benefit to all trading partners. Moreover, improved market access for developing countries' exports in conjunction with sound macroeconomic and environmental policies would have a positive environmental impact and therefore make an important contribution towards sustainable development.

2.6. Experience has shown that sustainable development requires a commitment to sound economic policies and management, an effective and predictable public administration, the integration of environmental concerns into decision-making and progress towards democratic government, in the light of country-specific conditions, which allows for full participation of all parties concerned. These attributes are essential for the fulfilment of the policy directions and objectives listed below.

2.7. The commodity sector dominates the economies of many developing countries in terms of production, employment and export earnings. An important feature of the world commodity economy in the 1980s was the prevalence of very low and declining real prices for most commodities in international markets and a resulting substantial contraction in commodity export earnings for many producing countries. The ability of those countries to mobilize, through international trade, the resources needed to finance investments required for sustainable development may be impaired by this development and by tariff and non-tariff impediments, including tariff escalation, limiting their access to export markets. The removal of existing distortions in international trade is essential. In particular, the achievement of this objective requires that there be substantial and progressive reduction in the support and protection of agriculture - covering

internal regimes, market access and export subsidies - as well as of industry and other sectors, in order to avoid inflicting large losses on the more efficient producers, especially in developing countries. Thus, in agriculture, industry and other sectors, there is scope for initiatives aimed at trade liberalization and at policies to make production more responsive to environment and development needs. Trade liberalization should therefore be pursued on a global basis across economic sectors so as to contribute to sustainable development.

2.8. The international trading environment has been affected by a number of developments that have created new challenges and opportunities and have made multilateral economic cooperation of even greater importance. World trade has continued to grow faster than world output in recent years. However, the expansion of world trade has been unevenly spread, and only a limited number of developing countries have been capable of achieving appreciable growth in their exports. Protectionist pressures and unilateral policy actions continue to endanger the functioning of an open multilateral trading system, affecting particularly the export interests of developing countries. Economic integration processes have intensified in recent years and should impart dynamism to global trade and enhance the trade and development possibilities for developing countries. In recent years, a growing number of these countries have adopted courageous policy reforms involving ambitious autonomous trade liberalization, while far-reaching reforms and profound restructuring processes are taking place in Central and Eastern European countries, paving the way for their integration into the world economy and the international trading system. Increased attention is being devoted to enhancing the role of enterprises and promoting competitive markets through adoption of competitive policies. The GSP has proved to be a useful trade policy instrument, although its objectives will have to be fulfilled, and trade facilitation strategies relating to electronic data interchange (EDI) have been effective in improving the trading efficiency of the public and private sectors. The interactions between environment policies and trade issues are manifold and have not yet been fully assessed. An early, balanced, comprehensive and successful outcome of the Uruguay Round of multilateral trade negotiations would bring about further liberalization and expansion of world trade, enhance the trade and development possibilities of developing countries and provide greater security and predictability to the international trading system.

Objectives

2.9. In the years ahead, and taking into account the results of the Uruguay Round of multilateral trade negotiations, Governments should continue to strive to meet the following objectives:

(a) To promote an open, non-discriminatory and equitable multilateral trading system that will enable all countries - in particular, the developing countries - to improve their economic structures and improve the standard of living of their populations through sustained economic development;

(b) To improve access to markets for exports of developing countries;

(c) To improve the functioning of commodity markets and achieve sound, compatible and consistent commodity policies at national and international levels with a view to optimizing the contribution of the commodity sector to sustainable development, taking into account environmental considerations;

(d) To promote and support policies, domestic and international, that make economic growth and environmental protection mutually supportive.

Activities

(a) International and regional cooperation and coordination

Promoting an international trading system that takes account of the needs of developing countries

2.10. Accordingly, the international community should:

(a) Halt and reverse protectionism in order to bring about further liberalization and expansion of world trade, to the benefit of all countries, in particular the developing countries;

(b) Provide for an equitable, secure, non-discriminatory and predictable international trading system;

(c) Facilitate, in a timely way, the integration of all countries into the world economy and the international trading system;

(d) Ensure that environment and trade policies are mutually supportive, with a view to achieving sustainable development;

(e) Strengthen the international trade policies system through an early, balanced, comprehensive and successful outcome of the Uruguay Round of multilateral trade negotiations.

2.11. The international community should aim at finding ways and means of achieving a better functioning and enhanced transparency of commodity markets, greater diversification of the commodity sector in developing economies within a macroeconomic framework that takes into consideration a country's economic structure, resource endowments and market opportunities, and better management of natural resources that takes into account the necessities of sustainable development.

2.12. Therefore, all countries should implement previous commitments to halt and reverse protectionism and further expand market access, particularly in areas of interest to developing countries. This improvement of market access will be facilitated by appropriate structural adjustment in developed countries. Developing countries should continue the trade-policy reforms and structural adjustment they have undertaken. It is thus urgent to achieve an

improvement in market access conditions for commodities, notably through the progressive removal of barriers that restrict imports, particularly from developing countries, of commodity products in primary and processed forms, as well as the substantial and progressive reduction of types of support that induce uncompetitive production, such as production and export subsidies.

(b) Management-related activities

Developing domestic policies that maximize the benefits of trade liberalization for sustainable development

2.13. For developing countries to benefit from the liberalization of trading systems, they should implement the following policies, as appropriate:

(a) Create a domestic environment supportive of an optimal balance between production for the domestic and export markets and remove biases against exports and discourage inefficient import-substitution;

(b) Promote the policy framework and the infrastructure required to improve the efficiency of export and import trade as well as the functioning of domestic markets.

2.14. The following policies should be adopted by developing countries with respect to commodities consistent with market efficiency:

(a) Expand processing, distribution and improve marketing practices and the competitiveness of the commodity sector;

(b) Diversify in order to reduce dependence on commodity exports;

(c) Reflect efficient and sustainable use of factors of production in the formation of commodity prices, including the reflection of environmental, social and resources costs.

(c) Data and information

Encouraging data collection and research

2.15. GATT, UNCTAD and other relevant institutions should continue to collect appropriate trade data and information. The Secretary-General of the United Nations is requested to strengthen the Trade Control Measures Information System managed by UNCTAD.

Improving international cooperation in commodity trade and the diversification of the sector

2.16. With regard to commodity trade, Governments should, directly or through appropriate international organizations, where appropriate:

(a) Seek optimal functioning of commodity markets, inter alia, through improved market transparency involving exchanges of views and information on investment plans, prospects and markets for individual commodities. Substantive negotiations between producers and consumers should be pursued with a view to achieving viable and more efficient international agreements that take into account market trends, or arrangements, as well as study groups. In this regard, particular attention should be paid to the agreements on cocoa, coffee, sugar and tropical timber. The importance of international commodity agreements and arrangements is underlined. Occupational health and safety matters, technology transfer and services associated with the production, marketing and promotion of commodities, as well as environmental considerations, should be taken into account;

(b) Continue to apply compensation mechanisms for shortfalls in commodity export earnings of developing countries in order to encourage diversification efforts;

(c) Provide assistance to developing countries upon request in the design and implementation of commodity policies and the gathering and utilization of information on commodity markets;

(d) Support the efforts of developing countries to promote the policy framework and infrastructure required to improve the efficiency of export and import trade;

(e) Support the diversification initiatives of the developing countries at the national, regional and international levels.

Means of implementation

(a) Financing and cost evaluation

2.17. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities in this programme area to be about $8.8 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Capacity-building

2.18. The above-mentioned technical cooperation activities aim at strengthening national capabilities for design and implementation of commodity policy, use and management of national resources and the gathering and utilization of information on commodity markets.

B. Making trade and environment mutually supportive

Basis for action

2.19. Environment and trade policies should be mutually supportive. An open, multilateral trading system makes possible a more efficient allocation and use of resources and thereby contributes to an increase in production and incomes and to lessening demands on the environment. It thus provides additional resources needed for economic growth and development and improved environmental protection. A sound environment, on the other hand, provides the ecological and other resources needed to sustain growth and underpin a continuing expansion of trade. An open, multilateral trading system, supported by the adoption of sound environmental policies, would have a positive impact on the environment and contribute to sustainable development.

2.20. International cooperation in the environmental field is growing, and in a number of cases trade provisions in multilateral environment agreements have played a role in tackling global environmental challenges. Trade measures have thus been used in certain specific instances, where considered necessary, to enhance the effectiveness of environmental regulations for the protection of the environment. Such regulations should address the root causes of environmental degradation so as not to result in unjustified restrictions on trade. The challenge is to ensure that trade and environment policies are consistent and reinforce the process of sustainable development. However, account should be taken of the fact that environmental standards valid for developed countries may have unwarranted social and economic costs in developing countries.

Objectives

2.21. Governments should strive to meet the following objectives, through relevant multilateral forums, including GATT, UNCTAD and other international organizations:

(a) To make international trade and environment policies mutually supportive in favour of sustainable development;

(b) To clarify the role of GATT, UNCTAD and other international organizations in dealing with trade and environment-related issues, including, where relevant, conciliation procedure and dispute settlement;

(c) To encourage international productivity and competitiveness and encourage a constructive role on the part of industry in dealing with environment and development issues.

Activities

Developing an environment/trade and development agenda

2.22. Governments should encourage GATT, UNCTAD and other relevant international and regional economic institutions to examine, in accordance with their respective mandates and competences, the following propositions and principles:

(a) Elaborate adequate studies for the better understanding of the relationship between trade and environment for the promotion of sustainable development;

(b) Promote a dialogue between trade, development and environment communities;

(c) In those cases when trade measures related to environment are used, ensure transparency and compatibility with international obligations;

(d) Deal with the root causes of environment and development problems in a manner that avoids the adoption of environmental measures resulting in unjustified restrictions on trade;

(e) Seek to avoid the use of trade restrictions or distortions as a means to offset differences in cost arising from differences in environmental standards and regulations, since their application could lead to trade distortions and increase protectionist tendencies;

(f) Ensure that environment-related regulations or standards, including those related to health and safety standards, do not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on trade;

(g) Ensure that special factors affecting environment and trade policies in the developing countries are borne in mind in the application of environmental standards, as well as in the use of any trade measures. It is worth noting that standards that are valid in the most advanced countries may be inappropriate and of unwarranted social cost for the developing countries;

(h) Encourage participation of developing countries in multilateral agreements through such mechanisms as special transitional rules;

(i) Avoid unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country. Environmental measures addressing transborder or global environmental problems should, as far as possible, be based on an international consensus. Domestic measures targeted to achieve certain environmental objectives may need trade measures to render them effective. Should trade policy measures be found necessary for the enforcement of environmental policies, certain principles and rules should apply. These could include, inter alia, the principle of non-discrimination; the principle that the trade measure chosen should be the least

trade-restrictive necessary to achieve the objectives; an obligation to ensure transparency in the use of trade measures related to the environment and to provide adequate notification of national regulations; and the need to give consideration to the special conditions and developmental requirements of developing countries as they move towards internationally agreed environmental objectives;

(j) Develop more precision, where necessary, and clarify the relationship between GATT provisions and some of the multilateral measures adopted in the environment area;

(k) Ensure public input in the formation, negotiation and implementation of trade policies as a means of fostering increased transparency in the light of country-specific conditions;

(l) Ensure that environmental policies provide the appropriate legal and institutional framework to respond to new needs for the protection of the environment that may result from changes in production and trade specialization.

C. Providing adequate financial resources to developing countries

Basis for action

2.23. Investment is critical to the ability of developing countries to achieve needed economic growth to improve the welfare of their populations and to meet their basic needs in a sustainable manner, all without deteriorating or depleting the resource base that underpins development. Sustainable development requires increased investment, for which domestic and external financial resources are needed. Foreign private investment and the return of flight capital, which depend on a healthy investment climate, are an important source of financial resources. Many developing countries have experienced a decade-long situation of negative net transfer of financial resources, during which their financial receipts were exceeded by payments they had to make, in particular for debt-servicing. As a result, domestically mobilized resources had to be transferred abroad instead of being invested locally in order to promote sustainable economic development.

2.24. For many developing countries, the reactivation of development will not take place without an early and durable solution to the problems of external indebtedness, taking into account the fact that, for many developing countries, external debt burdens are a significant problem. The burden of debt-service payments on those countries has imposed severe constraints on their ability to accelerate growth and eradicate poverty and has led to a contraction in imports, investment and consumption. External indebtedness has emerged as a main factor in the economic stalemate in the developing countries. Continued vigorous implementation of the evolving international debt strategy is aimed at restoring debtor countries' external financial

viability, and the resumption of their growth and development would assist in achieving sustainable growth and development. In this context, additional financial resources in favour of developing countries and the efficient utilization of such resources are essential.

Objectives

2.25. The specific requirements for the implementation of the sectoral and cross-sectoral programmes included in Agenda 21 are dealt with in the relevant programme areas and in chapter 33 (Financial resources and mechanisms).

Activities

(a) Meeting international targets of official development assistance funding

2.26. As discussed in chapter 33, new and additional resources should be provided to support Agenda 21 programmes.

(b) Addressing the debt issue

2.27. In regard to the external debt incurred with commercial banks, the progress being made under the strengthened debt strategy is recognized and a more rapid implementation of this strategy is encouraged. Some countries have already benefited from the combination of sound adjustment policies and commercial bank debt reduction or equivalent measures. The international community encourages:

(a) Other countries with heavy debts to banks to negotiate similar commercial bank debt reduction with their creditors;

(b) The parties to such a negotiation to take due account of both the medium-term debt reduction and new money requirements of the debtor country;

(c) Multilateral institutions actively engaged in the strengthened international debt strategy to continue to support debt-reduction packages related to commercial bank debt with a view to ensuring that the magnitude of such financing is consonant with the evolving debt strategy;

(d) Creditor banks to participate in debt and debt-service reduction;

(e) Strengthened policies to attract direct investment, avoid unsustainable levels of debt and foster the return of flight capital.

2.28. With regard to debt owed to official bilateral creditors, the recent measures taken by the Paris Club with regard to more generous terms of relief to the poorest most indebted countries are welcomed. Ongoing efforts to implement these "Trinidad terms" measures in a manner commensurate with the payments capacity of those countries and in a way that gives additional support to their economic reform efforts are welcomed. The substantial bilateral debt reduction undertaken by some creditor countries is also

welcomed, and others which are in a position to do so are encouraged to take similar action.

2.29. The actions of low-income countries with substantial debt burdens which continue, at great cost, to service their debt and safeguard their creditworthiness are commended. Particular attention should be paid to their resource needs. Other debt-distressed developing countries which are making great efforts to continue to service their debt and meet their external financial obligations also deserve due attention.

2.30. In connection with multilateral debt, it is urged that serious attention be given to continuing to work towards growth-oriented solutions to the problem of developing countries with serious debt-servicing problems, including those whose debt is mainly to official creditors or to multilateral financial institutions. Particularly in the case of low-income countries in the process of economic reform, the support of the multilateral financial institutions in the form of new disbursements and the use of their concessional funds is welcomed. The use of support groups should be continued in providing resources to clear arrears of countries embarking upon vigorous economic reform programmes supported by IMF and the World Bank. Measures by the multilateral financial institutions such as the refinancing of interest on non-concessional loans with IDA reflows - "fifth dimension" - are noted with appreciation.

Means of implementation

Financing and cost evaluation*

D. Encouraging economic policies conducive to sustainable development

Basis for action

2.31. The unfavourable external environment facing developing countries makes domestic resource mobilization and efficient allocation and utilization of domestically mobilized resources all the more important for the promotion of sustainable development. In a number of countries, policies are necessary to correct misdirected public spending, large budget deficits and other macroeconomic imbalances, restrictive policies and distortions in the areas of exchange rates, investment and finance, and obstacles to entrepreneurship. In developed countries, continuing policy reform and adjustment, including appropriate savings rates, would help generate resources to support the transition to sustainable development both domestically and in developing countries.

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* See chapter 33 (Financial resources and mechanisms).

2.32. Good management that fosters the association of effective, efficient, honest, equitable and accountable public administration with individual rights and opportunities is an essential element for sustainable, broadly based development and sound economic performance at all development levels. All countries should increase their efforts to eradicate mismanagement of public and private affairs, including corruption, taking into account the factors responsible for, and agents involved in, this phenomenon.

2.33. Many indebted developing countries are undergoing structural adjustment programmes relating to debt rescheduling or new loans. While such programmes are necessary for improving the balance in fiscal budgets and balance-of-payments accounts, in some cases they have resulted in adverse social and environmental effects, such as cuts in allocations for health care, education and environmental protection. It is important to ensure that structural adjustment programmes do not have negative impacts on the environment and social development so that such programmes can be more in line with the objectives of sustainable development.

Objectives

2.34. It is necessary to establish, in the light of the country-specific conditions, economic policy reforms that promote the efficient planning and utilization of resources for sustainable development through sound economic and social policies, foster entrepreneurship and the incorporation of social and environmental costs in resource pricing, and remove sources of distortion in the area of trade and investment.

Activities

(a) Management-related activities

Promoting sound economic policies

2.35. The industrialized countries and other countries in a position to do so should strengthen their efforts:

(a) To encourage a stable and predictable international economic environment, particularly with regard to monetary stability, real rates of interest and fluctuations in key exchange rates;

(b) To stimulate savings and reduce fiscal deficits;

(c) To ensure that the processes of policy coordination take into account the interests and concerns of the developing countries, including the need to promote positive action to support the efforts of the least developed countries to halt their marginalization in the world economy;

(d) To undertake appropriate national macroeconomic and structural policies aimed at promoting non-inflationary growth, narrowing their major external imbalances and increasing the adjustment capacity of their economies.

2.36. Developing countries should consider strengthening their efforts to implement sound economic policies:

(a) That maintain the monetary and fiscal discipline required to promote price stability and external balance;

(b) That result in realistic exchange rates;

(c) That raise domestic savings and investment, as well as improve returns to investment.

2.37. More specifically, all countries should develop policies that improve efficiency in the allocation of resources and take full advantage of the opportunities offered by the changing global economic environment. In particular, wherever appropriate, and taking into account national strategies and objectives, countries should:

(a) Remove the barriers to progress caused by bureaucratic inefficiencies, administrative strains, unnecessary controls and the neglect of market conditions;

(b) Promote transparency in administration and decision-making;

(c) Encourage the private sector and foster entrepreneurship by improving institutional facilities for enterprise creation and market entry. The essential objective would be to simplify or remove the restrictions, regulations and formalities that make it more complicated, costly and time-consuming to set up and operate enterprises in many developing countries;

(d) Promote and support the investment and infrastructure required for sustainable economic growth and diversification on an environmentally sound and sustainable basis;

(e) Provide scope for appropriate economic instruments, including market mechanisms, in harmony with the objectives of sustainable development and fulfilment of basic needs;

(f) Promote the operation of effective tax systems and financial sectors;

(g) Provide opportunities for small-scale enterprises, both farm and non-farm, and for the indigenous population and local communities to contribute fully to the attainment of sustainable development;

(h) Remove biases against exports and in favour of inefficient import substitution and establish policies that allow them to benefit fully from the flows of foreign investment, within the framework of national, social, economic and developmental goals;

(i) Promote the creation of a domestic economic environment supportive of an optimal balance between production for the domestic and export markets.

(b) International and regional cooperation and coordination

2.38. Governments of developed countries and those of other countries in a position to do so should, directly or through appropriate international and regional organizations and international lending institutions, enhance their efforts to provide developing countries with increased technical assistance for the following:

(a) Capacity-building in the nation's design and implementation of economic policies, upon request;

(b) Design and operation of efficient tax systems, accounting systems and financial sectors;

(c) Promotion of entrepreneurship.

2.39. International financial and development institutions should further review their policies and programmes in the light of the objective of sustainable development.

2.40. Stronger economic cooperation among developing countries has long been accepted as an important component of efforts to promote economic growth and technological capabilities and to accelerate development in the developing world. Therefore, the efforts of the developing countries to promote economic cooperation among themselves should be enhanced and continue to be supported by the international community.

Means of implementation

(a) Financing and cost evaluation

2.41. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities in this programme area to be about $50 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Capacity-building

2.42. The above-mentioned policy changes in developing countries involve substantial national efforts for capacity-building in the areas of public administration, central banking, tax administration, savings institutions and financial markets.

2.43. Particular efforts in the implementation of the four programme areas identified in this chapter are warranted in view of the especially acute environmental and developmental problems of the least developed countries.

Chapter 3

COMBATING POVERTY

PROGRAMME AREA

Enabling the poor to achieve sustainable livelihoods

Basis for action

3.1. Poverty is a complex multidimensional problem with origins in both the national and international domains. No uniform solution can be found for global application. Rather, country-specific programmes to tackle poverty and international efforts supporting national efforts, as well as the parallel process of creating a supportive international environment, are crucial for a solution to this problem. The eradication of poverty and hunger, greater equity in income distribution and human resource development remain major challenges everywhere. The struggle against poverty is the shared responsibility of all countries.

3.2. While managing resources sustainably, an environmental policy that focuses mainly on the conservation and protection of resources must take due account of those who depend on the resources for their livelihoods. Otherwise it could have an adverse impact both on poverty and on chances for long-term success in resource and environmental conservation. Equally, a development policy that focuses mainly on increasing the production of goods without addressing the sustainability of the resources on which production is based will sooner or later run into declining productivity, which could also have an adverse impact on poverty. A specific anti-poverty strategy is therefore one of the basic conditions for ensuring sustainable development. An effective strategy for tackling the problems of poverty, development and environment simultaneously should begin by focusing on resources, production and people and should cover demographic issues, enhanced health care and education, the rights of women, the role of youth and of indigenous people and local communities and a democratic participation process in association with improved governance.

3.3. Integral to such action is, together with international support, the promotion of economic growth in developing countries that is both sustained and sustainable and direct action in eradicating poverty by strengthening employment and income-generating programmes.

Objectives

3.4. The long-term objective of enabling all people to achieve sustainable livelihoods should provide an integrating factor that allows policies to address issues of development, sustainable resource management and poverty eradication simultaneously. The objectives of this programme area are:

(a) To provide all persons urgently with the opportunity to earn a sustainable livelihood;

(b) To implement policies and strategies that promote adequate levels of funding and focus on integrated human development policies, including income generation, increased local control of resources, local institution-strengthening and capacity-building and greater involvement of non-governmental organizations and local levels of government as delivery mechanisms;

(c) To develop for all poverty-stricken areas integrated strategies and programmes of sound and sustainable management of the environment, resource mobilization, poverty eradication and alleviation, employment and income generation;

(d) To create a focus in national development plans and budgets on investment in human capital, with special policies and programmes directed at rural areas, the urban poor, women and children.

Activities

3.5. Activities that will contribute to the integrated promotion of sustainable livelihoods and environmental protection cover a variety of sectoral interventions involving a range of actors, from local to global, and are essential at every level, especially the community and local levels. Enabling actions will be necessary at the national and international levels, taking full account of regional and subregional conditions to support a locally driven and country-specific approach. In general design, the programmes should:

(a) Focus on the empowerment of local and community groups through the principle of delegating authority, accountability and resources to the most appropriate level to ensure that the programme will be geographically and ecologically specific;

(b) Contain immediate measures to enable those groups to alleviate poverty and to develop sustainability;

(c) Contain a long-term strategy aimed at establishing the best possible conditions for sustainable local, regional and national development that would eliminate poverty and reduce the inequalities between various population groups. It should assist the most disadvantaged groups - in particular, women, children and youth within those groups - and refugees. The groups will include poor smallholders, pastoralists, artisans, fishing communities, landless people, indigenous communities, migrants and the urban informal sector.

3.6. The focus here is on specific cross-cutting measures - in particular, in the areas of basic education, primary/maternal health care, and the advancement of women.

(a) Empowering communities

3.7. Sustainable development must be achieved at every level of society. Peoples' organizations, women's groups and non-governmental organizations are important sources of innovation and action at the local level and have a strong interest and proven ability to promote sustainable livelihoods. Governments, in cooperation with appropriate international and non-governmental organizations, should support a community-driven approach to sustainability, which would include, inter alia:

(a) Empowering women through full participation in decision-making;

(b) Respecting the cultural integrity and the rights of indigenous people and their communities;

(c) Promoting or establishing grass-roots mechanisms to allow for the sharing of experience and knowledge between communities;

(d) Giving communities a large measure of participation in the sustainable management and protection of the local natural resources in order to enhance their productive capacity;

(e) Establishing a network of community-based learning centres for capacity-building and sustainable development.

(b) Management-related activities

3.8. Governments, with the assistance of and in cooperation with appropriate international, non-governmental and local community organizations, should establish measures that will directly or indirectly:

(a) Generate remunerative employment and productive occupational opportunities compatible with country-specific factor endowments, on a scale sufficient to take care of prospective increases in the labour force and to cover backlogs;

(b) With international support, where necessary, develop adequate infrastructure, marketing systems, technology systems, credit systems and the like and the human resources needed to support the above actions and to achieve a widening of options for resource-poor people. High priority should be given to basic education and professional training;

(c) Provide substantial increases in economically efficient resource productivity and measures to ensure that the local population benefits in adequate measure from resource use;

(d) Empower community organizations and people to enable them to achieve sustainable livelihoods;

(e) Set up an effective primary health care and maternal health care system accessible to all;

(f) Consider strengthening/developing legal frameworks for land management, access to land resources and land ownership - in particular, for women - and for the protection of tenants;

(g) Rehabilitate degraded resources, to the extent practicable, and introduce policy measures to promote sustainable use of resources for basic human needs;

(h) Establish new community-based mechanisms and strengthen existing mechanisms to enable communities to gain sustained access to resources needed by the poor to overcome their poverty;

(i) Implement mechanisms for popular participation - particularly by poor people, especially women - in local community groups, to promote sustainable development;

(j) Implement, as a matter of urgency, in accordance with country-specific conditions and legal systems, measures to ensure that women and men have the same right to decide freely and responsibly on the number and spacing of their children and have access to the information, education and means, as appropriate, to enable them to exercise this right in keeping with their freedom, dignity and personally held values, taking into account ethical and cultural considerations. Governments should take active steps to implement programmes to establish and strengthen preventive and curative health facilities, which include women-centred, women-managed, safe and effective reproductive health care and affordable, accessible services, as appropriate, for the responsible planning of family size, in keeping with freedom, dignity and personally held values, taking into account ethical and cultural considerations. Programmes should focus on providing comprehensive health care, including pre-natal care, education and information on health and responsible parenthood and should provide the opportunity for all women to breast-feed fully, at least during the first four months post-partum. Programmes should fully support women's productive and reproductive roles and well-being, with special attention to the need for providing equal and improved health care for all children and the need to reduce the risk of maternal and child mortality and sickness;

(k) Adopt integrated policies aiming at sustainability in the management of urban centres;

(l) Undertake activities aimed at the promotion of food security and, where appropriate, food self-sufficiency within the context of sustainable agriculture;

(m) Support research on and integration of traditional methods of production that have been shown to be environmentally sustainable;

(n) Actively seek to recognize and integrate informal-sector activities into the economy by removing regulations and hindrances that discriminate against activities in those sectors;

(o) Consider making available lines of credit and other facilities for the informal sector and improved access to land for the landless poor so that they can acquire the means of production and reliable access to natural resources. In many instances special considerations for women are required. Strict feasibility appraisals are needed for borrowers to avoid debt crises;

(p) Provide the poor with access to fresh water and sanitation;

(q) Provide the poor with access to primary education.

(c) Data, information and evaluation

3.9. Governments should improve the collection of information on target groups and target areas in order to facilitate the design of focused programmes and activities, consistent with the target-group needs and aspirations. Evaluation of such programmes should be gender-specific, since women are a particularly disadvantaged group.

(d) International and regional cooperation and coordination

3.10. The United Nations system, through its relevant organs, organizations and bodies, in cooperation with Member States and with appropriate international and non-governmental organizations, should make poverty alleviation a major priority and should:

(a) Assist Governments, when requested, in the formulation and implementation of national action programmes on poverty alleviation and sustainable development. Action-oriented activities of relevance to the above objectives, such as poverty eradication, projects and programmes supplemented where relevant by food aid, and support and special emphasis on employment and income generation, should be given particular attention in this regard;

(b) Promote technical cooperation among developing countries for poverty eradication activities;

(c) Strengthen existing structures in the United Nations system for coordination of action relating to poverty eradication, including the establishment of a focal point for information exchange and the formulation and implementation of replicable pilot projects to combat poverty;

(d) In the follow-up of the implementation of Agenda 21, give high priority to the review of the progress made in eradicating poverty;

(e) Examine the international economic framework, including resource flows and structural adjustment programmes, to ensure that social and environmental concerns are addressed, and in this connection, conduct a review of the policies of international organizations, bodies and agencies, including financial institutions, to ensure the continued provision of basic services to the poor and needy;

(f) Promote international cooperation to address the root causes of poverty. The development process will not gather momentum if developing countries are weighted down by external indebtedness, if development finance is inadequate, if barriers restrict access to markets and if commodity prices and the terms of trade in developing countries remain depressed.

Means of implementation

(a) Financing and cost evaluation

3.11. The secretariat of the Conference has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $30 billion, including about $15 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. This estimate overlaps estimates in other parts of Agenda 21. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Capacity-building

3.12. National capacity-building for implementation of the above activities is crucial and should be given high priority. It is particularly important to focus capacity-building at the local community level in order to support a community-driven approach to sustainability and to establish and strengthen mechanisms to allow sharing of experience and knowledge between community groups at national and international levels. Requirements for such activities are considerable and are related to the various relevant sectors of Agenda 21 calling for requisite international, financial and technological support.

Chapter 4

CHANGING CONSUMPTION PATTERNS

4.1. This chapter contains the following programme areas:

(a) Focusing on unsustainable patterns of production and consumption;

(b) Developing national policies and strategies to encourage changes in unsustainable consumption patterns.

4.2. Since the issue of changing consumption patterns is very broad, it is addressed in several parts of Agenda 21, notably those dealing with energy, transportation and wastes, and in the chapters on economic instruments and the transfer of technology. The present chapter should also be read in conjunction with chapter 5 (Demographic dynamics and sustainability).

PROGRAMME AREAS

A. Focusing on unsustainable patterns of production and consumption

Basis for action

4.3. Poverty and environmental degradation are closely interrelated. While poverty results in certain kinds of environmental stress, the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries, which is a matter of grave concern, aggravating poverty and imbalances.

4.4. Measures to be undertaken at the international level for the protection and enhancement of the environment must take fully into account the current imbalances in the global patterns of consumption and production.

4.5. Special attention should be paid to the demand for natural resources generated by unsustainable consumption and to the efficient use of those resources consistent with the goal of minimizing depletion and reducing pollution. Although consumption patterns are very high in certain parts of the world, the basic consumer needs of a large section of humanity are not being met. This results in excessive demands and unsustainable lifestyles among the richer segments, which place immense stress on the environment. The poorer segments, meanwhile, are unable to meet food, health care, shelter and educational needs. Changing consumption patterns will require a multipronged strategy focusing on demand, meeting the basic needs of the poor, and reducing wastage and the use of finite resources in the production process.

4.6. Growing recognition of the importance of addressing consumption has also not yet been matched by an understanding of its implications. Some economists are questioning traditional concepts of economic growth and underlining the importance of pursuing economic objectives that take account of the full value of natural resource capital. More needs to be known about the role of consumption in relation to economic growth and population dynamics in order to formulate coherent international and national policies.

Objectives

4.7. Action is needed to meet the following broad objectives:

(a) To promote patterns of consumption and production that reduce environmental stress and will meet the basic needs of humanity;

(b) To develop a better understanding of the role of consumption and how to bring about more sustainable consumption patterns.

Activities

(a) Management-related activities

Adopting an international approach to achieving sustainable consumption patterns

4.8. In principle, countries should be guided by the following basic objectives in their efforts to address consumption and lifestyles in the context of environment and development:

(a) All countries should strive to promote sustainable consumption patterns;

(b) Developed countries should take the lead in achieving sustainable consumption patterns;

(c) Developing countries should seek to achieve sustainable consumption patterns in their development process, guaranteeing the provision of basic needs for the poor, while avoiding those unsustainable patterns, particularly in industrialized countries, generally recognized as unduly hazardous to the environment, inefficient and wasteful, in their development processes. This requires enhanced technological and other assistance from industrialized countries.

4.9. In the follow-up of the implementation of Agenda 21 the review of progress made in achieving sustainable consumption patterns should be given high priority.

(b) Data and information

Undertaking research on consumption

4.10. In order to support this broad strategy, Governments, and/or private research and policy institutes, with the assistance of regional and international economic and environmental organizations, should make a concerted effort to:

(a) Expand or promote databases on production and consumption and develop methodologies for analysing them;

(b) Assess the relationship between production and consumption, environment, technological adaptation and innovation, economic growth and development, and demographic factors;

(c) Examine the impact of ongoing changes in the structure of modern industrial economies away from material-intensive economic growth;

(d) Consider how economies can grow and prosper while reducing the use of energy and materials and the production of harmful materials;

(e) Identify balanced patterns of consumption worldwide which the Earth can support in the long term.

Developing new concepts of sustainable economic growth and prosperity

4.11. Consideration should also be given to the present concepts of economic growth and the need for new concepts of wealth and prosperity which allow higher standards of living through changed lifestyles and are less dependent on the Earth's finite resources and more in harmony with the Earth's carrying capacity. This should be reflected in the evolution of new systems of national accounts and other indicators of sustainable development.

(c) International cooperation and coordination

4.12. While international review processes exist for examining economic, development and demographic factors, more attention needs to be paid to issues related to consumption and production patterns and sustainable lifestyles and environment.

4.13. In the follow-up of the implementation of Agenda 21, reviewing the role and impact of unsustainable production and consumption patterns and lifestyles and their relation to sustainable development should be given high priority.

Financing and cost evaluation

4.14. The Conference secretariat has estimated that implementation of this programme is not likely to require significant new financial resources.

B. Developing national policies and strategies to encourage changes in unsustainable consumption patterns

Basis for action

4.15. Achieving the goals of environmental quality and sustainable development will require efficiency in production and changes in consumption patterns in order to emphasize optimization of resource use and minimization of waste. In many instances, this will require reorientation of existing production and consumption patterns that have developed in industrial societies and are in turn emulated in much of the world.

4.16. Progress can be made by strengthening positive trends and directions that are emerging, as part of a process aimed at achieving significant changes in the consumption patterns of industries, Governments, households and individuals.

Objectives

4.17. In the years ahead, Governments, working with appropriate organizations, should strive to meet the following broad objectives:

(a) To promote efficiency in production processes and reduce wasteful consumption in the process of economic growth, taking into account the development needs of developing countries;

(b) To develop a domestic policy framework that will encourage a shift to more sustainable patterns of production and consumption;

(c) To reinforce both values that encourage sustainable production and consumption patterns and policies that encourage the transfer of environmentally sound technologies to developing countries.

Activities

(a) Encouraging greater efficiency in the use of energy and resources

4.18. Reducing the amount of energy and materials used per unit in the production of goods and services can contribute both to the alleviation of environmental stress and to greater economic and industrial productivity and competitiveness. Governments, in cooperation with industry, should therefore intensify efforts to use energy and resources in an economically efficient and environmentally sound manner by:

(a) Encouraging the dissemination of existing environmentally sound technologies;

(b) Promoting research and development in environmentally sound technologies;

(c) Assisting developing countries to use these technologies efficiently and to develop technologies suited to their particular circumstances;

(d) Encouraging the environmentally sound use of new and renewable sources of energy;

(e) Encouraging the environmentally sound and sustainable use of renewable natural resources.

(b) Minimizing the generation of wastes

4.19. At the same time, society needs to develop effective ways of dealing with the problem of disposing of mounting levels of waste products and materials. Governments, together with industry, households and the public, should make a concerted effort to reduce the generation of wastes and waste products by:

(a) Encouraging recycling in industrial processes and at the consumed level;

(b) Reducing wasteful packaging of products;

(c) Encouraging the introduction of more environmentally sound products.

(c) Assisting individuals and households to make environmentally sound purchasing decisions

4.20. The recent emergence in many countries of a more environmentally conscious consumer public, combined with increased interest on the part of some industries in providing environmentally sound consumer products, is a significant development that should be encouraged. Governments and international organizations, together with the private sector, should develop criteria and methodologies for the assessment of environmental impacts and resource requirements throughout the full life cycle of products and processes. Results of those assessments should be transformed into clear indicators in order to inform consumers and decision makers.

4.21. Governments, in cooperation with industry and other relevant groups, should encourage expansion of environmental labelling and other environmentally related product information programmes designed to assist consumers to make informed choices.

4.22. They should also encourage the emergence of an informed consumer public and assist individuals and households to make environmentally informed choices by:

(a) Providing information on the consequences of consumption choices and behaviour so as to encourage demand for environmentally sound products and use of products;

(b) Making consumers aware of the health and environmental impact of products, through such means as consumer legislation and environmental labelling;

(c) Encouraging specific consumer-oriented programmes, such as recycling and deposit/refund systems.

(d) Exercising leadership through government purchasing

4.23. Governments themselves also play a role in consumption, particularly in countries where the public sector plays a large role in the economy and can have a considerable influence on both corporate decisions and public perceptions. They should therefore review the purchasing policies of their agencies and departments so that they may improve, where possible, the environmental content of government procurement policies, without prejudice to international trade principles.

(e) Moving towards environmentally sound pricing

4.24. Without the stimulus of prices and market signals that make clear to producers and consumers the environmental costs of the consumption of energy, materials and natural resources and the generation of wastes, significant changes in consumption and production patterns seem unlikely to occur in the near future.

4.25. Some progress has begun in the use of appropriate economic instruments to influence consumer behaviour. These instruments include environmental charges and taxes, deposit/refund systems, etc. This process should be encouraged in the light of country-specific conditions.

(f) Reinforcing values that support sustainable consumption

4.26. Governments and private-sector organizations should promote more positive attitudes towards sustainable consumption through education, public awareness programmes and other means, such as positive advertising of products and services that utilize environmentally sound technologies or encourage sustainable production and consumption patterns. In the review of the implementation of Agenda 21, an assessment of the progress achieved in developing these national policies and strategies should be given due consideration.

Means of implementation

4.27. This programme is concerned primarily with changes in unsustainable patterns of consumption and production and values that encourage sustainable consumption patterns and lifestyles. It requires the combined efforts of Governments, consumers and producers. Particular attention should be paid to the significant role played by women and households as consumers and the potential impacts of their combined purchasing power on the economy.

Chapter 5

DEMOGRAPHIC DYNAMICS AND SUSTAINABILITY

5.1. This chapter contains the following programme areas:

(a) Developing and disseminating knowledge concerning the links between demographic trends and factors and sustainable development;

(b) Formulating integrated national policies for environment and development, taking into account demographic trends and factors;

(c) Implementing integrated, environment and development programmes at the local level, taking into account demographic trends and factors.

PROGRAMME AREAS

A. Developing and disseminating knowledge concerning the links between demographic trends and factors and sustainable development

Basis for action

5.2. Demographic trends and factors and sustainable development have a synergistic relationship.

5.3. The growth of world population and production combined with unsustainable consumption patterns places increasingly severe stress on the life-supporting capacities of our planet. These interactive processes affect the use of land, water, air, energy and other resources. Rapidly growing cities, unless well-managed, face major environmental problems. The increase in both the number and size of cities calls for greater attention to issues of local government and municipal management. The human dimensions are key elements to consider in this intricate set of relationships and they should be adequately taken into consideration in comprehensive policies for sustainable development. Such policies should address the linkages of demographic trends and factors, resource use, appropriate technology dissemination, and development. Population policy should also recognize the role played by human beings in environmental and development concerns. There is a need to increase awareness of this issue among decision makers at all levels and to provide both better information on which to base national and international policies and a framework against which to interpret this information.

5.4. There is a need to develop strategies to mitigate both the adverse impact on the environment of human activities and the adverse impact of environmental change on human populations. The world's population is expected to exceed 8 billion by the year 2020. Sixty per cent of the world's population already live in coastal areas, while 65 per cent of cities with

populations above 2.5 million are located along the world coasts; several of them are already at or below the present sea level.

Objectives

5.5. The following objectives should be achieved as soon as practicable:

(a) To incorporate demographic trends and factors in the global analysis of environment and development issues;

(b) To develop a better understanding of the relationships among demographic dynamics, technology, cultural behaviour, natural resources and life support systems;

(c) To assess human vulnerability in ecologically sensitive areas and centres of population to determine the priorities for action at all levels, taking full account of community defined needs.

Activities

Research on the interaction between demographic trends and factors and sustainable development

5.6. Relevant international, regional and national institutions should consider undertaking the following activities:

(a) Identifying the interactions between demographic processes, natural resources and life support systems, bearing in mind regional and subregional variations deriving from, inter alia, different levels of development;

(b) Integrating demographic trends and factors into the ongoing study of environmental change, using the expertise of international, regional and national research networks and of local communities, first, to study the human dimensions of environmental change and, second, to identify vulnerable areas;

(c) Identifying priority areas for action and developing strategies and programmes to mitigate the adverse impact of environmental change on human populations, and vice versa.

Means of implementation

(a) Financing and cost evaluation

5.7. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $10 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Strengthening research programmes that integrate population, environment and development

5.8. In order to integrate demographic analysis into a broader social science perspective on environment and development, interdisciplinary research should be increased. International institutions and networks of experts should enhance their scientific capacity, taking full account of community experience and knowledge, and should disseminate the experience gained in multidisciplinary approaches and in linking theory to action.

5.9. Better modelling capabilities should be developed, identifying the range of possible outcomes of current human activities, especially the interrelated impact of demographic trends and factors, per capita resource use and wealth distribution, as well as the major migration flows that may be expected with increasing climatic events and cumulative environmental change that may destroy people's local livelihoods.

(c) Developing information and public awareness

5.10. Socio-demographic information should be developed in a suitable format for interfacing with physical, biological and socio-economic data. Compatible spatial and temporal scales, cross-country and time-series information, as well as global behavioural indicators should be developed, learning from local communities' perceptions and attitudes.

5.11. Awareness should be increased at all levels concerning the need to optimize the sustainable use of resources through efficient resource management, taking into account the development needs of the populations of developing countries.

5.12. Awareness should be increased of the fundamental linkages between improving the status of women and demographic dynamics, particularly through women's access to education, primary and reproductive health care programmes, economic independence and their effective, equitable participation in all levels of decision-making.

5.13. Results of research concerned with sustainable development issues should be disseminated through technical reports, scientific journals, the media, workshops, forums or other means so that the information can be used by decision makers at all levels and increase public awareness.

(d) Developing and/or enhancing institutional capacity and collaboration

5.14. Collaboration and exchange of information should be increased between research institutions and international, regional and national agencies and all other sectors (including the private sector, local communities, non-governmental organizations and scientific institutions) from both the industrialized and developing countries, as appropriate.

5.15. Efforts should be intensified to enhance the capacities of national and local governments, the private sector and non-governmental organizations in developing countries to meet the growing needs for improved management of rapidly growing urban areas.

B. Formulating integrated national policies for environment and development, taking into account demographic trends and factors

Basis for action

5.16. Existing plans for sustainable development have generally recognized demographic trends and factors as elements that have a critical influence on consumption patterns, production, lifestyles and long-term sustainability. But in future, more attention will have to be given to these issues in general policy formulation and the design of development plans. To do this, all countries will have to improve their own capacities to assess the environment and development implications of their demographic trends and factors. They will also need to formulate and implement policies and action programmes where appropriate. Policies should be designed to address the consequences of population growth built into population momentum, while at the same time incorporating measures to bring about demographic transition. They should combine environmental concerns and population issues within a holistic view of development whose primary goals include the alleviation of poverty; secure livelihoods; good health; quality of life; improvement of the status and income of women and their access to schooling and professional training, as well as fulfilment of their personal aspirations; and empowerment of individuals and communities. Recognizing that large increases in the size and number of cities will occur in developing countries under any likely population scenario, greater attention should be given to preparing for the needs, in particular of women and children, for improved municipal management and local government.

Objective

5.17. Full integration of population concerns into national planning, policy and decision-making processes should continue. Population policies and programmes should be considered, with full recognition of women's rights.

Activities

5.18. Governments and other relevant actors could, *inter alia*, undertake the following activities, with appropriate assistance from aid agencies, and report on their status of implementation to the International Conference on Population and Development to be held in 1994, especially to its committee on population and environment.

(a) Assessing the implications of national demographic trends and factors

5.19. The relationships between demographic trends and factors and environmental change and between environmental degradation and the components of demographic change should be analysed.

5.20. Research should be conducted on how environmental factors interact with socio-economic factors as a cause of migration.

5.21. Vulnerable population groups (such as rural landless workers, ethnic minorities, refugees, migrants, displaced people, women heads of household) whose changes in demographic structure may have specific impacts on sustainable development should be identified.

5.22. An assessment should be made of the implications of the age structure of the population on resource demand and dependency burdens, ranging from educational expenses for the young to health care and support for the elderly, and on household income generation.

5.23. An assessment should also be made of national population carrying capacity in the context of satisfaction of human needs and sustainable development, and special attention should be given to critical resources, such as water and land, and environmental factors, such as ecosystem health and biodiversity.

5.24. The impact of national demographic trends and factors on the traditional livelihoods of indigenous groups and local communities, including changes in traditional land use because of internal population pressures, should be studied.

(b) Building and strengthening a national information base

5.25. National databases on demographic trends and factors and environment should be built and/or strengthened, disaggregating data by ecological region (ecosystem approach), and population/environment profiles should be established by region.

5.26. Methodologies and instruments should be developed to identify areas where sustainability is, or may be, threatened by the environmental effects of demographic trends and factors, incorporating both current and projected demographic data linked to natural environmental processes.

5.27. Case-studies of local level responses by different groups to demographic dynamics should be developed, particularly in areas subject to environmental stress and in deteriorating urban centres.

5.28. Population data should be disaggregated by, inter alia, sex and age in order to take into account the implications of the gender division of labour for the use and management of natural resources.

(c) Incorporating demographic features into policies and plans

5.29. In formulating human settlements policies, account should be taken of resource needs, waste production and ecosystem health.

5.30. The direct and induced effects of demographic changes on environment and development programmes should, where appropriate, be integrated, and the impact on demographic features assessed.

5.31. National population policy goals and programmes that are consistent with national environment and development plans for sustainability and in keeping with the freedom, dignity and personally held values of individuals should be established and implemented.

5.32. Appropriate socio-economic policies for the young and the elderly, both in terms of family and state support systems, should be developed.

5.33. Policies and programmes should be developed for handling the various types of migrations that result from or induce environmental disruptions, with special attention to women and vulnerable groups.

5.34. Demographic concerns, including concerns for environmental migrants and displaced people, should be incorporated in the programmes for sustainable development of relevant international and regional institutions.

5.35. National reviews should be conducted and the integration of population policies in national development and environment strategies should be monitored nationally.

Means of implementation

(a) Financing and cost evaluation

5.36. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $90 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Raising awareness of demographic and sustainable development interactions

5.37. Understanding of the interactions between demographic trends and factors and sustainable development should be increased in all sectors of society. Stress should be placed on local and national action. Demographic and sustainable development education should be coordinated and integrated in both the formal and non-formal education sectors. Particular attention should be given to population literacy programmes, notably for women. Special emphasis should be placed on the linkage between these programmes, primary environmental care and the provision of primary health care and services.

(c) Strengthening institutions

5.38. The capacity of national, regional and local structures to deal with issues relating to demographic trends and factors and sustainable development should be enhanced. This would involve strengthening the relevant bodies responsible for population issues to enable them to elaborate policies consistent with the national prospects for sustainable development. Cooperation among government, national research institutions, non-governmental organizations and local communities in assessing problems and evaluating policies should also be enhanced.

5.39. The capacity of the relevant United Nations organs, organizations and bodies, international and regional intergovernmental bodies, non-governmental organizations and local communities should, as appropriate, be enhanced to help countries develop sustainable development policies on request and, as appropriate, provide assistance to environmental migrants and displaced people.

5.40. Inter-agency support for national sustainable development policies and programmes should be improved through better coordination of population and environment activities.

(d) Promoting human resource development

5.41. The international and regional scientific institutions should assist Governments, upon request, to include concerns regarding the population/environment interactions at the global, ecosystem and micro-levels in the training of demographers and population and environment specialists. Training should include research on linkages and ways to design integrated strategies.

C. Implementing integrated environment and development programmes at the local level, taking into account demographic trends and factors

Basis for action

5.42. Population programmes are more effective when implemented together with appropriate cross-sectoral policies. To attain sustainability at the local level, a new framework is needed that integrates demographic trends and factors with such factors as ecosystem health, technology and human settlements, and with socio-economic structures and access to resources. Population programmes should be consistent with socio-economic and environmental planning. Integrated sustainable development programmes should closely correlate action on demographic trends and factors with resource management activities and development goals that meet the needs of the people concerned.

Objective

5.43. Population programmes should be implemented along with natural resource management and development programmes at the local level that will ensure sustainable use of natural resources, improve the quality of life of the people and enhance environmental quality.

Activities

5.44. Governments and local communities, including community-based women's organizations and national non-governmental organizations, consistent with national plans, objectives, strategies and priorities, could, inter alia, undertake the activities set out below with the assistance and cooperation of international organizations, as appropriate. Governments could share their experience in the implementation of Agenda 21 at the International Conference on Population and Development, to be held in 1994, especially its committee on population and environment.

(a) Developing a framework for action

5.45. An effective consultative process should be established and implemented with concerned groups of society where the formulation and decision-making of all components of the programmes are based on a nationwide consultative process drawing on community meetings, regional workshops and national seminars, as appropriate. This process should ensure that views of women and men on needs, perspective and constraints are equally well reflected in the design of programmes, and that solutions are rooted in specific experience. The poor and underprivileged should be priority groups in this process.

5.46. Nationally determined policies for integrated and multifaceted programmes, with special attention to women, to the poorest people living in critical areas and to other vulnerable groups should be implemented, ensuring the involvement of groups with a special potential to act as agents for change and sustainable development. Special emphasis should be placed on those programmes that achieve multiple objectives, encouraging sustainable economic development, and mitigating adverse impacts of demographic trends and factors, and avoiding long-term environmental damage. Food security, access to secure tenure, basic shelter, and essential infrastructure, education, family welfare, women's reproductive health, family credit schemes, reforestation programmes, primary environmental care, women's employment should, as appropriate, be included among other factors.

5.47. An analytical framework should be developed to identify complementary elements of sustainable development policies as well as the national mechanisms to monitor and evaluate their effects on population dynamics.

5.48. Special attention should be given to the critical role of women in population/environment programmes and in achieving sustainable development. Projects should take advantage of opportunities to link social, economic and environmental gains for women and their families. Empowerment of women is

essential and should be assured through education, training and policies to accord and improve women's right and access to assets, human and civil rights, labour-saving measures, job opportunities and participation in decision-making. Population/environment programmes must enable women to mobilize themselves to alleviate their burden and improve their capacity to participate in and benefit from socio-economic development. Specific measures should be undertaken to close the gap between female and male illiteracy rates.

(b) Supporting programmes that promote changes in demographic trends and factors towards sustainability

5.49. Reproductive health programmes and services, should, as appropriate, be developed and enhanced to reduce maternal and infant mortality from all causes and enable women and men to fulfil their personal aspirations in terms of family size, in a way in keeping with their freedom and dignity and personally held values.

5.50. Governments should take active steps to implement, as a matter of urgency, in accordance with country-specific conditions and legal systems, measures to ensure that women and men have the same right to decide freely and responsibly on the number and spacing of their children, to have access to the information, education and means, as appropriate, to enable them to exercise this right in keeping with their freedom, dignity and personally held values taking into account ethical and cultural considerations.

5.51. Governments should take active steps to implement programmes to establish and strengthen preventive and curative health facilities that include women-centred, women-managed, safe and effective reproductive health care and affordable, accessible services, as appropriate, for the responsible planning of family size, in keeping with freedom, dignity and personally held values and taking into account ethical and cultural considerations. Programmes should focus on providing comprehensive health care, including pre-natal care, education and information on health and responsible parenthood and should provide the opportunity for all women to breast-feed fully, at least during the first four months post-partum. Programmes should fully support women's productive and reproductive roles and well being, with special attention to the need for providing equal and improved health care for all children and the need to reduce the risk of maternal and child mortality and sickness.

5.52. Consistent with national priorities, culturally based information and education programmes that transmit reproductive health messages to men and women that are easily understood should be developed.

(c) Creating appropriate institutional conditions

5.53. Constituencies and institutional conditions to facilitate the implementation of demographic activities should, as appropriate, be fostered. This requires support and commitment from political, indigenous, religious and

traditional authorities, the private sector and the national scientific community. In developing these appropriate institutional conditions, countries should closely involve established national machinery for women.

5.54. Population assistance should be coordinated with bilateral and multilateral donors to ensure that population needs and requirements of all developing countries are addressed, fully respecting the overall coordinating responsibility and the choice and strategies of the recipient countries.

5.55. Coordination should be improved at local and international levels. Working practices should be enhanced in order to make optimum use of resources, draw on collective experience and improve the implementation of programmes. UNFPA and other relevant agencies should strengthen the coordination of international cooperation activities with recipient and donor countries in order to ensure that adequate funding is available to respond to growing needs.

5.56. Proposals should be developed for local, national and international population/environment programmes in line with specific needs for achieving sustainability. Where appropriate, institutional changes must be implemented so that old-age security does not entirely depend on input from family members.

Means of implementation

(a) Financing and cost evaluation

5.57. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $7 billion, including about $3.5 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Research

5.58. Research should be undertaken with a view to developing specific action programmes; it will be necessary to establish priorities between proposed areas of research.

5.59. Socio-demographic research should be conducted on how populations respond to a changing environment.

5.60. Understanding of socio-cultural and political factors that can positively influence acceptance of appropriate population policy instruments should be improved.

5.61. Surveys of changes in needs for appropriate services relating to responsible planning of family size, reflecting variations among different socio-economic groups and variations in different geographical regions should be undertaken.

(c) Human resource development and capacity-building

5.62. The areas of human resource development and capacity-building, with particular attention to the education and training of women, are areas of critical importance and are a very high priority in the implementation of population programmes.

5.63. Workshops to help programme and projects managers to link population programmes to other development and environmental goals should be conducted.

5.64. Educational materials, including guides/workbooks for planners and decision makers and other actors of population/environment/development programmes, should be developed.

5.65. Cooperation should be developed between Governments, scientific institutions and non-governmental organizations within the region, and similar institutions outside the region. Cooperation with local organizations should be fostered in ordered to raise awareness, engage in demonstration projects and report on the experience gained.

5.66. The recommendations contained in this chapter should in no way prejudice discussions at the International Conference on Population and Development in 1994, which will be the appropriate forum for dealing with population and development issues, taking into account the recommendations of the International Conference on Population, held in Mexico City in 1984, 1/ and the Forward-looking Strategies for the Advancement of Women, 2/ adopted by the World Conference to Review and Appraise the Achievements of the United Decade for Women: Equality, Development and Peace, held in Nairobi in 1985.

Notes

1/ Report of the International Conference on Population, Mexico City, 6-14 August 1984 (United Nations publication, Sales No. E.84.XIII.8), chap. I.

2/ Report of the World Conference to Review and Appraise the Achievements of the United Nations Decade for Women: Equality, Development and Peace, Nairobi, 15-26 July 1985 (United Nations publication, Sales No. E.84.IV.10), chap. I, sect. A.

Chapter 6

PROTECTING AND PROMOTING HUMAN HEALTH

INTRODUCTION

6.1. Health and development are intimately interconnected. Both insufficient development leading to poverty and inappropriate development resulting in overconsumption, coupled with an expanding world population, can result in severe environmental health problems in both developing and developed nations. Action items under Agenda 21 must address the primary health needs of the world's population, since they are integral to the achievement of the goals of sustainable development and primary environmental care. The linkage of health, environmental and socio-economic improvements requires intersectoral efforts. Such efforts, involving education, housing, public works and community groups, including businesses, schools and universities and religious, civic and cultural organizations, are aimed at enabling people in their communities to ensure sustainable development. Particularly relevant is the inclusion of prevention programmes rather than relying solely on remediation and treatment. Countries ought to develop plans for priority actions, drawing on the programme areas in this chapter, which are based on cooperative planning by the various levels of government, non-governmental organizations and local communities. An appropriate international organization, such as WHO, should coordinate these activities.

6.2. The following programme areas are contained in this chapter:

(a) Meeting primary health care needs, particularly in rural areas;

(b) Control of communicable diseases;

(c) Protecting vulnerable groups;

(d) Meeting the urban health challenge;

(e) Reducing health risks from environmental pollution and hazards.

PROGRAMME AREAS

A. Meeting primary health care needs, particularly in rural areas

Basis for action

6.3. Health ultimately depends on the ability to manage successfully the interaction between the physical, spiritual, biological and economic/social environment. Sound development is not possible without a healthy population; yet most developmental activities affect the environment to some degree, which in turn causes or exacerbates many health problems. Conversely, it is the

very lack of development that adversely affects the health condition of many people, which can be alleviated only through development. The health sector cannot meet basic needs and objectives on its own; it is dependent on social, economic and spiritual development, while directly contributing to such development. It is also dependent on a healthy environment, including the provision of a safe water supply and sanitation and the promotion of a safe food supply and proper nutrition. Particular attention should be directed towards food safety, with priority placed on the elimination of food contamination; comprehensive and sustainable water policies to ensure safe drinking water and sanitation to preclude both microbial and chemical contamination; and promotion of health education, immunization and provision of essential drugs. Education and appropriate services regarding responsible planning of family size, with respect for cultural, religious and social aspects, in keeping with freedom, dignity and personally held values and taking into account ethical and cultural considerations, also contribute to these intersectoral activities.

Objectives

6.4. Within the overall strategy to achieve health for all by the year 2000, the objectives are to meet the basic health needs of rural peri-urban and urban populations; to provide the necessary specialized environmental health services; and to coordinate the involvement of citizens, the health sector, the health-related sectors and relevant non-health sectors (business, social, educational and religious institutions) in solutions to health problems. As a matter of priority, health service coverage should be achieved for population groups in greatest need, particularly those living in rural areas.

Activities

6.5. National Governments and local authorities, with the support of relevant non-governmental organizations and international organizations, in the light of countries' specific conditions and needs, should strengthen their health sector programmes, with special attention to rural needs, to:

(a) Build basic health infrastructures, monitoring and planning systems:

(i) Develop and strengthen primary health care systems that are practical, community-based, scientifically sound, socially acceptable and appropriate to their needs and that meet basic health needs for clean water, safe food and sanitation;

(ii) Support the use and strengthening of mechanisms that improve coordination between health and related sectors at all appropriate levels of government, and in communities and relevant organizations;

(iii) Develop and implement rational and affordable approaches to the establishment and maintenance of health facilities;

(iv) Ensure and, where appropriate, increase provision of social services support;

(v) Develop strategies, including reliable health indicators, to monitor the progress and evaluate the effectiveness of health programmes;

(vi) Explore ways to finance the health system based on the assessment of the resources needed and identify the various financing alternatives;

(vii) Promote health education in schools, information exchange, technical support and training;

(viii) Support initiatives for self-management of services by vulnerable groups;

(ix) Integrate traditional knowledge and experience into national health systems, as appropriate;

(x) Promote the provisions for necessary logistics for outreach activities, particularly in rural areas;

(xi) Promote and strengthen community-based rehabilitation activities for the rural handicapped;

(b) Support research and methodology development:

(i) Establish mechanisms for sustained community involvement in environmental health activities, including optimization of the appropriate use of community financial and human resources;

(ii) Conduct environmental health research, including behaviour research and research on ways to increase coverage and ensure greater utilization of services by peripheral, underserved and vulnerable populations, as appropriate to good prevention services and health care;

(iii) Conduct research into traditional knowledge of prevention and curative health practices.

Means of implementation

(a) Financing and cost evaluation

6.6. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $40 billion, including about $5 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

6.7. New approaches to planning and managing health care systems and facilities should be tested, and research on ways of integrating appropriate technologies into health infrastructures supported. The development of scientifically sound health technology should enhance adaptability to local needs and maintainability by community resources, including the maintenance and repair of equipment used in health care. Programmes to facilitate the transfer and sharing of information and expertise should be developed, including communication methods and educational materials.

(c) Human resource development

6.8. Intersectoral approaches to the reform of health personnel development should be strengthened to ensure its relevance to the "Health for All" strategies. Efforts to enhance managerial skills at the district level should be supported, with the aim of ensuring the systematic development and efficient operation of the basic health system. Intensive, short, practical training programmes with emphasis on skills in effective communication, community organization and facilitation of behaviour change should be developed in order to prepare the local personnel of all sectors involved in social development for carrying out their respective roles. In cooperation with the education sector, special health education programmes should be developed focusing on the role of women in the health-care system.

(d) Capacity-building

6.9. Governments should consider adopting enabling and facilitating strategies to promote the participation of communities in meeting their own needs, in addition to providing direct support to the provision of health-care services. A major focus should be the preparation of community-based health and health-related workers to assume an active role in community health education, with emphasis on team work, social mobilization and the support of other development workers. National programmes should cover district health systems in urban, peri-urban and rural areas, the delivery of health programmes at the district level, and the development and support of referral services.

B. Control of communicable diseases

Basis for action

6.10. Advances in the development of vaccines and chemotherapeutic agents have brought many communicable diseases under control. However, there remain many important communicable diseases for which environmental control measures are indispensable, especially in the field of water supply and sanitation. Such diseases include cholera, diarrhoeal diseases, leishmaniasis, malaria and schistosomiasis. In all such instances, the environmental measures, either as an integral part of primary health care or undertaken outside the health

sector, form an indispensable component of overall disease control strategies, together with health and hygiene education, and in some cases, are the only component.

6.11. With HIV infection levels estimated to increase to 30-40 million by the year 2000, the socio-economic impact of the pandemic is expected to be devastating for all countries, and increasingly for women and children. While direct health costs will be substantial, they will be dwarfed by the indirect costs of the pandemic - mainly costs associated with the loss of income and decreased productivity of the workforce. The pandemic will inhibit growth of the service and industrial sectors and significantly increase the costs of human capacity-building and retraining. The agricultural sector is particularly affected where production is labour-intensive.

Objectives

6.12. A number of goals have been formulated through extensive consultations in various international forums attended by virtually all Governments, relevant United Nations organizations (including WHO, UNICEF, UNFPA, UNESCO, UNDP and the World Bank) and a number of non-governmental organizations. Goals (including but not limited to those listed below) are recommended for implementation by all countries where they are applicable, with appropriate adaptation to the specific situation of each country in terms of phasing, standards, priorities and availability of resources, with respect for cultural, religious and social aspects, in keeping with freedom, dignity and personally held values and taking into account ethical considerations. Additional goals that are particularly relevant to a country's specific situation should be added in the country's national plan of action (Plan of Action for Implementing the World Declaration on the Survival, Protection and Development of Children in the 1990s). 1/ Such national level action plans should be coordinated and monitored from within the public health sector. Some major goals are:

(a) By the year 2000, to eliminate guinea worm disease (dracunculiasis);

(b) By the year 2000, eradicate polio;

(c) By the year 2000, to effectively control onchocerciasis (river blindness) and leprosy;

(d) By 1995, to reduce measles deaths by 95 per cent and reduce measles cases by 90 per cent compared with pre-immunization levels;

(e) By continued efforts, to provide health and hygiene education and to ensure universal access to safe drinking water and universal access to sanitary measures of excreta disposal, thereby markedly reducing waterborne diseases such as cholera and schistosomiasis and reducing:

(i) By the year 2000, the number of deaths from childhood diarrhoea in developing countries by 50 to 70 per cent;

(ii) By the year 2000, the incidence of childhood diarrhoea in developing countries by at least 25 to 50 per cent;

(f) By the year 2000, to initiate comprehensive programmes to reduce mortality from acute respiratory infections in children under five years by at least one third, particularly in countries with high infant mortality;

(g) By the year 2000, to provide 95 per cent of the world's child population with access to appropriate care for acute respiratory infections within the community and at first referral level;

(h) By the year 2000, to institute anti-malaria programmes in all countries where malaria presents a significant health problem and maintain the transmission-free status of areas freed from endemic malaria;

(i) By the year 2000, to implement control programmes in countries where major human parasitic infections are endemic and achieve an overall reduction in the prevalence of schistosomiasis and of other trematode infections by 40 per cent and 25 per cent, respectively, from a 1984 baseline, as well as a marked reduction in incidence, prevalence and intensity of filarial infections;

(j) To mobilize and unify national and international efforts against AIDS to prevent infection and to reduce the personal and social impact of HIV infection;

(k) To contain the resurgence of tuberculosis, with particular emphasis on multiple antibiotic resistant forms;

(l) To accelerate research on improved vaccines and implement to the fullest extent possible the use of vaccines in the prevention of disease.

Activities

6.13. Each national Government, in accordance with national plans for public health, priorities and objectives, should consider developing a national health action plan with appropriate international assistance and support, including, at a minimum, the following components:

(a) National public health systems:

(i) Programmes to identify environmental hazards in the causation of communicable diseases;

(ii) Monitoring systems of epidemiological data to ensure adequate forecasting of the introduction, spread or aggravation of communicable diseases;

(iii) Intervention programmes, including measures consistent with the principles of the global AIDS strategy;

(iv) Vaccines for the prevention of communicable diseases;

(b) Public information and health education:

Provide education and disseminate information on the risks of endemic communicable diseases and build awareness on environmental methods for control of communicable diseases to enable communities to play a role in the control of communicable diseases;

(c) Intersectoral cooperation and coordination:

(i) Second experienced health professionals to relevant sectors, such as planning, housing and agriculture;

(ii) Develop guidelines for effective coordination in the areas of professional training, assessment of risks and development of control technology;

(d) Control of environmental factors that influence the spread of communicable diseases:

Apply methods for the prevention and control of communicable diseases, including water supply and sanitation control, water pollution control, food quality control, integrated vector control, garbage collection and disposal and environmentally sound irrigation practices;

(e) Primary health care system:

(i) Strengthen prevention programmes, with particular emphasis on adequate and balanced nutrition;

(ii) Strengthen early diagnostic programmes and improve capacities for early preventative/treatment action;

(iii) Reduce the vulnerability to HIV infection of women and their offspring;

(f) Support for research and methodology development:

(i) Intensify and expand multidisciplinary research, including focused efforts on the mitigation and environmental control of tropical diseases;

(ii) Carry out intervention studies to provide a solid epidemiological basis for control policies and to evaluate the efficiency of alternative approaches;

(iii) Undertake studies in the population and among health workers to determine the influence of cultural, behavioural and social factors on control policies;

(g) Development and dissemination of technology:

(i) Develop new technologies for the effective control of communicable diseases;

(ii) Promote studies to determine how to optimally disseminate results from research;

(iii) Ensure technical assistance, including the sharing of knowledge and know-how.

Means of implementation

(a) Financing and cost evaluation

6.14. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $4 billion, including about $900 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

6.15. Efforts to prevent and control diseases should include investigations of the epidemiological, social and economic bases for the development of more effective national strategies for the integrated control of communicable diseases. Cost-effective methods of environmental control should be adapted to local developmental conditions.

(c) Human resource development

6.16. National and regional training institutions should promote broad intersectoral approaches to prevention and control of communicable diseases, including training in epidemiology and community prevention and control, immunology, molecular biology and the application of new vaccines. Health education materials should be developed for use by community workers and for the education of mothers for the prevention and treatment of diarrhoeal diseases in the home.

(d) Capacity-building

6.17. The health sector should develop adequate data on the distribution of communicable diseases, as well as the institutional capacity to respond and collaborate with other sectors for prevention, mitigation and correction of communicable disease hazards through environmental protection. The advocacy at policy- and decision-making levels should be gained, professional and societal support mobilized, and communities organized in developing self-reliance.

C. Protecting vulnerable groups

Basis for action

6.18. In addition to meeting basic health needs, specific emphasis has to be given to protecting and educating vulnerable groups, particularly infants, youth, women, indigenous people and the very poor as a prerequisite for sustainable development. Special attention should also be paid to the health needs of the elderly and disabled population.

6.19. Infants and children. Approximately one third of the world's population are children under 15 years old. At least 15 million of these children die annually from such preventable causes as birth trauma, birth asphyxia, acute respiratory infections, malnutrition, communicable diseases and diarrhoea. The health of children is affected more severely than other population groups by malnutrition and adverse environmental factors, and many children risk exploitation as cheap labour or in prostitution.

6.20. Youth. As has been the historical experience of all countries, youth are particularly vulnerable to the problems associated with economic development, which often weakens traditional forms of social support essential for the healthy development, of young people. Urbanization and changes in social mores have increased substance abuse, unwanted pregnancy and sexually transmitted diseases, including AIDS. Currently more than half of all people alive are under the age of 25, and four of every five live in developing countries. Therefore it is important to ensure that historical experience is not replicated.

6.21. Women. In developing countries, the health status of women remains relatively low, and during the 1980s poverty, malnutrition and general ill-health in women were even rising. Most women in developing countries still do not have adequate basic educational opportunities and they lack the means of promoting their health, responsibly controlling their reproductive life and improving their socio-economic status. Particular attention should be given to the provision of pre-natal care to ensure healthy babies.

6.22. Indigenous people and their communities. Indigenous people had their communities make up a significant percentage of global population. The outcomes of their experience have tended to be very similar in that the basis of their relationship with traditional lands has been fundamentally changed. They tend to feature disproportionately in unemployment, lack of housing, poverty and poor health. In many countries the number of indigenous people is growing faster than the general population. Therefore it is important to target health initiatives for indigenous people.

Objectives

6.23. The general objectives of protecting vulnerable groups are to ensure that all such individuals should be allowed to develop to their full potential (including healthy physical, mental and spiritual development); to ensure that

young people can develop, establish and maintain healthy lives; to allow women to perform their key role in society; and to support indigenous people through educational, economic and technical opportunities.

6.24. Specific major goals for child survival, development and protection were agreed upon at the World Summit for Children and remain valid also for Agenda 21. Supporting and sectoral goals cover women's health and education, nutrition, child health, water and sanitation, basic education and children in difficult circumstances.

6.25. Governments should take active steps to implement, as a matter of urgency, in accordance with country specific conditions and legal systems, measures to ensure that women and men have the same right to decide freely and responsibly on the number and spacing of their children, to have access to the information, education and means, as appropriate, to enable them to exercise this right in keeping with their freedom, dignity and personally held values, taking into account ethical and cultural considerations.

6.26. Governments should take active steps to implement programmes to establish and strengthen preventive and curative health facilities which include women-centred, women-managed, safe and effective reproductive health care and affordable, accessible services, as appropriate, for the responsible planning of family size, in keeping with freedom, dignity and personally held values and taking into account ethical and cultural considerations. Programmes should focus on providing comprehensive health care, including pre-natal care, education and information on health and responsible parenthood and should provide the opportunity for all women to breast-feed fully, at least during the first four months post-partum. Programmes should fully support women's productive and reproductive roles and well-being, with special attention to the need for providing equal and improved health care for all children and the need to reduce the risk of maternal and child mortality and sickness.

Activities

6.27. National Governments, in cooperation with local and non-governmental organizations, should initiate or enhance programmes in the following areas:

(a) Infants and children:

(i) Strengthen basic health-care services for children in the context of primary health-care delivery, including prenatal care, breast-feeding, immunization and nutrition programmes;

(ii) Undertake widespread adult education on the use of oral rehydration therapy for diarrhoea, treatment of respiratory infections and prevention of communicable diseases;

(iii) Promote the creation, amendment and enforcement of a legal framework protecting children from sexual and workplace exploitation;

(iv) Protect children from the effects of environmental and occupational toxic compounds;

(b) Youth:

Strengthen services for youth in health, education and social sectors in order to provide better information, education, counselling and treatment for specific health problems, including drug abuse;

(c) Women:

(i) Involve women's groups in decision-making at the national and community levels to identify health risks and incorporate health issues in national action programmes on women and development;

(ii) Provide concrete incentives to encourage and maintain attendance of women of all ages at school and adult education courses, including health education and training in primary, home and maternal health care;

(iii) Carry out baseline surveys and knowledge, attitude and practice studies on the health and nutrition of women throughout their life cycle, especially as related to the impact of environmental degradation and adequate resources;

(d) Indigenous people and their communities:

(i) Strengthen, through resources and self-management, preventative and curative health services;

(ii) Integrate traditional knowledge and experience into health systems.

Means of implementation

(a) Financing and cost evaluation

6.28. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $3.7 billion, including about $400 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

6.29. Educational, health and research institutions should be strengthened to provide support to improve the health of vulnerable groups. Social research

on the specific problems of these groups should be expanded and methods for implementing flexible pragmatic solutions explored, with emphasis on preventive measures. Technical support should be provided to Governments, institutions and non-governmental organizations for youth, women and indigenous people in the health sector.

(c) Human resources development

6.30. The development of human resources for the health of children, youth and women should include reinforcement of educational institutions, promotion of interactive methods of education for health and increased use of mass media in disseminating information to the target groups. This requires the training of more community health workers, nurses, midwives, physicians, social scientists and educators, the education of mothers, families and communities and the strengthening of ministries of education, health, population etc.

(d) Capacity-building

6.31. Governments should promote, where necessary: (i) the organization of national, intercountry and interregional symposia and other meetings for the exchange of information among agencies and groups concerned with the health of children, youth, women and indigenous people, and (ii) women's organizations, youth groups and indigenous people's organizations to facilitate health and consult them on the creation, amendment and enforcement of legal frameworks to ensure a healthy environment for children, youth, women and indigenous peoples.

D. Meeting the urban health challenge

Basis for action

6.32. For hundreds of millions of people, the poor living conditions in urban and peri-urban areas are destroying lives, health, and social and moral values. Urban growth has outstripped society's capacity to meet human needs, leaving hundreds of millions of people with inadequate incomes, diets, housing and services. Urban growth exposes populations to serious environmental hazards and has outstripped the capacity of municipal and local governments to provide the environmental health services that the people need. All too often, urban development is associated with destructive effects on the physical environment and the resource base needed for sustainable development. Environmental pollution in urban areas is associated with excess morbidity and mortality. Overcrowding and inadequate housing contribute to respiratory diseases, tuberculosis, meningitis and other diseases. In urban environments, many factors that affect human health are outside the health sector. Improvements in urban health therefore will depend on coordinated action by all levels of government, health care providers, businesses, religious groups, social and educational institutions and citizens.

Objectives

6.33. The health and well-being of all urban dwellers must be improved so that they can contribute to economic and social development. The global objective is to achieve a 10 to 40 per cent improvement in health indicators by the year 2000. The same rate of improvement should be achieved for environmental, housing and health service indicators. These include the development of quantitative objectives for infant mortality, maternal mortality, percentage of low birth weight newborns and specific indicators (e.g. tuberculosis as an indicator of crowded housing, diarrhoeal diseases as indicators of inadequate water and sanitation, rates of industrial and transportation accidents that indicate possible opportunities for prevention of injury, and social problems such as drug abuse, violence and crime that indicate underlying social disorders).

Activities

6.34. Local authorities, with the appropriate support of national Governments and international organizations should be encouraged to take effective measures to initiate or strengthen the following activities:

(a) Develop and implement municipal and local health plans:

(i) Establish or strengthen intersectoral committees at both the political and technical level, including active collaboration on linkages with scientific, cultural, religious, medical, business, social and other city institutions, using networking arrangements;

(ii) Adopt or strengthen municipal or local "enabling strategies" that emphasize "doing with" rather than "doing for" and create supportive environments for health;

(iii) Ensure that public health education in schools, workplace, mass media etc. is provided or strengthened;

(iv) Encourage communities to develop personal skills and awareness of primary health care;

(v) Promote and strengthen community-based rehabilitation activities for the urban and peri-urban disabled and the elderly;

(b) Survey, where necessary, the existing health, social and environmental conditions in cities, including documentation of intra-urban differences;

(c) Strengthen environmental health services:

(i) Adopt health impact and environmental impact assessment procedures;

(ii) Provide basic and in-service training for new and existing personnel;

(d) Establish and maintain city networks for collaboration and exchange of models of good practice.

Means of implementation

(a) Financing and cost evaluation

6.35. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $222 million, including about $22 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

6.36. Decision-making models should be further developed and more widely used to assess the costs and the health and environment impacts of alternative technologies and strategies. Improvement in urban development and management requires better national and municipal statistics based on practical, standardized indicators. Development of methods is a priority for the measurement of intra-urban and intra-district variations in health status and environmental conditions, and for the application of this information in planning and management.

(c) Human resources development

6.37. Programmes must supply the orientation and basic training of municipal staff required for the healthy city processes. Basic and in-service training of environmental health personnel will also be needed.

(d) Capacity-building

6.38. The programme is aimed towards improved planning and management capabilities in the municipal and local government and its partners in central Government, the private sector and universities. Capacity development should be focused on obtaining sufficient information, improving coordination mechanisms linking all the key actors, and making better use of available instruments and resources for implementation.

E. Reducing health risks from environmental pollution and hazards

Basis for action

6.39. In many locations around the world the general environment (air, water and land), workplaces and even individual dwellings are so badly polluted that the health of hundreds of millions of people is adversely affected. This is,

inter alia, due to past and present developments in consumption and production patterns and lifestyles, in energy production and use, in industry, in transportation etc., with little or no regard for environmental protection. There have been notable improvements in some countries, but deterioration of the environment continues. The ability of countries to tackle pollution and health problems is greatly restrained because of lack of resources. Pollution control and health protection measures have often not kept pace with economic development. Considerable development-related environmental health hazards exist in the newly industrializing countries. Furthermore, the recent analysis of WHO has clearly established the interdependence among the factors of health, environment and development and has revealed that most countries are lacking such integration as would lead to an effective pollution control mechanism. 2/ Without prejudice to such criteria as may be agreed upon by the international community, or to standards which will have to be determined nationally, it will be essential in all cases to consider the systems of values prevailing in each country and the extent of the applicability of standards that are valid for the most advanced countries but may be inappropriate and of unwarranted social cost for the developing countries.

Objectives

6.40. The overall objective is to minimize hazards and maintain the environment to a degree that human health and safety is not impaired or endangered and yet encourage development to proceed. Specific programme objectives are:

(a) By the year 2000, to incorporate appropriate environmental and health safeguards as part of national development programmes in all countries;

(b) By the year 2000, to establish, as appropriate, adequate national infrastructure and programmes for providing environmental injury, hazard surveillance and the basis for abatement in all countries;

(c) By the year 2000, to establish, as appropriate, integrated programmes for tackling pollution at the source and at the disposal site, with a focus on abatement actions in all countries;

(d) To identify and compile, as appropriate, the necessary statistical information on health effects to support cost/benefit analysis, including environmental health impact assessment for pollution control, prevention and abatement measures.

Activities

6.41. Nationally determined action programmes, with international assistance, support and coordination, where necessary, in this area should include:

(a) Urban air pollution:

(i) Develop appropriate pollution control technology on the basis of

risk assessment and epidemiological research for the introduction of environmentally sound production processes and suitable safe mass transport;

(ii) Develop air pollution control capacities in large cities, emphasizing enforcement programmes and using monitoring networks, as appropriate;

(b) Indoor air pollution:

(i) Support research and develop programmes for applying prevention and control methods to reducing indoor air pollution, including the provision of economic incentives for the installation of appropriate technology;

(ii) Develop and implement health education campaigns, particularly in developing countries, to reduce the health impact of domestic use of biomass and coal;

(c) Water pollution:

(i) Develop appropriate water pollution control technologies on the basis of health risk assessment;

(ii) Develop water pollution control capacities in large cities;

(d) Pesticides:

Develop mechanisms to control the distribution and use of pesticides in order to minimize the risks to human health by transportation, storage, application and residual effects of pesticides used in agriculture and preservation of wood;

(e) Solid waste:

(i) Develop appropriate solid waste disposal technologies on the basis of health risk assessment;

(ii) Develop appropriate solid waste disposal capacities in large cities;

(f) Human settlements:

Develop programmes for improving health conditions in human settlements, in particular within slums and non-tenured settlements, on the basis of health risk assessment;

(g) Noise:

Develop criteria for maximum permitted safe noise exposure levels and promote noise assessment and control as part of environmental health programmes;

(h) Ionizing and non-ionizing radiation:

Develop and implement appropriate national legislation, standards and enforcement procedures on the basis of existing international guidelines;

(i) Effects of ultraviolet radiation:

(i) Undertake, as a matter of urgency, research on the effects on human health of the increasing ultraviolet radiation reaching the earth's surface as a consequence of depletion of the stratospheric ozone layer;

(ii) On the basis of the outcome of this research, consider taking appropriate remedial measures to mitigate the above-mentioned effects on human beings;

(j) Industry and energy production:

(i) Establish environmental health impact assessment procedures for the planning and development of new industries and energy facilities;

(ii) Incorporate appropriate health risk analysis in all national programmes for pollution control and management, with particular emphasis on toxic compounds such as lead;

(iii) Establish industrial hygiene programmes in all major industries for the surveillance of workers' exposure to health hazards;

(iv) Promote the introduction of environmentally sound technologies within the industry and energy sectors;

(k) Monitoring and assessment:

Establish, as appropriate, adequate environmental monitoring capacities for the surveillance of environmental quality and the health status of populations;

(l) Injury monitoring and reduction:

(i) Support, as appropriate, the development of systems to monitor the incidence and cause of injury to allow well-targeted intervention/prevention strategies;

(ii) Develop, in accordance with national plans, strategies in all sectors (industry, traffic and others) consistent with the WHO safe cities and safe communities programmes, to reduce the frequency and severity of injury;

(iii) Emphasize preventive strategies to reduce occupationally derived diseases and diseases caused by environmental and occupational toxins to enhance worker safety;

(m) Research promotion and methodology development:

(i) Support the development of new methods for the quantitative assessment of health benefits and cost associated with different pollution control strategies;

(ii) Develop and carry out interdisciplinary research on the combined health effects of exposure to multiple environmental hazards, including epidemiological investigations of long-term exposures to low levels of pollutants and the use of biological markers capable of estimating human exposures, adverse effects and susceptibility to environmental agents.

Means of implementation

(a) Financing and cost evaluation

6.42. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $3 billion, including about $115 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

6.43. Although technology to prevent or abate pollution is readily available for a large number of problems, for programme and policy development countries should undertake research within an intersectoral framework. Such efforts should include collaboration with the business sector. Cost/effect analysis and environmental impact assessment methods should be developed through cooperative international programmes and applied to the setting of priorities and strategies in relation to health and development.

6.44. In the activities listed in paragraph 6.41 (a) to (m) above, developing country efforts should be facilitated by access to and transfer of technology, know-how and information, from the repositories of such knowledge and technologies, in conformity with chapter 34.

(c) Human resource development

6.45. Comprehensive national strategies should be designed to overcome the lack of qualified human resources, which is a major impediment to progress in dealing with environmental health hazards. Training should include

environmental and health officials at all levels from managers to inspectors. More emphasis needs to be placed on including the subject of environmental health in the curricula of secondary schools and universities and on educating the public.

(d) Capacity-building

6.46. Each country should develop the knowledge and practical skills to foresee and identify environmental health hazards, and the capacity to reduce the risks. Basic capacity requirements must include knowledge about environmental health problems and awareness on the part of leaders, citizens and specialists; operational mechanisms for intersectoral and intergovernmental cooperation in development planning and management and in combating pollution; arrangements for involving private and community interests in dealing with social issues; delegation of authority and distribution of resources to intermediate and local levels of government to provide front-line capabilities to meet environmental health needs.

Notes

1/ A/45/625, annex.

2/ Report of the WHO Commission on Health and Environment (Geneva, forthcoming).

Chapter 7

PROMOTING SUSTAINABLE HUMAN SETTLEMENT DEVELOPMENT

INTRODUCTION

7.1. In industrialized countries, the consumption patterns of cities are severely stressing the global ecosystem, while settlements in the developing world need more raw material, energy, and economic development simply to overcome basic economic and social problems. Human settlement conditions in many parts of the world, particularly the developing countries, are deteriorating mainly as a result of the low levels of investment in the sector attributable to the overall resource constraints in these countries. In the low-income countries for which recent data are available, an average of only 5.6 per cent of central government expenditure went to housing, amenities, social security and welfare. 1/ Expenditure by international support and finance organizations is equally low. For example, only 1 per cent of the United Nations system's total grant-financed expenditures in 1988 went to human settlements, 2/ while in 1991, loans from the World Bank and the International Development Association (IDA) for urban development and water supply and sewerage amounted to 5.5 and 5.4 per cent, respectively, of their total lending. 3/

7.2. On the other hand, available information indicates that technical cooperation activities in the human settlement sector generate considerable public and private sector investment. For example, every dollar of UNDP technical cooperation expenditure on human settlements in 1988 generated a follow-up investment of $122, the highest of all UNDP sectors of assistance. 4/

7.3. This is the foundation of the "enabling approach" advocated for the human settlement sector. External assistance will help to generate the internal resources needed to improve the living and working environments of all people by the year 2000 and beyond, including the growing number of unemployed - the no-income group. At the same time the environmental implications of urban development should be recognized and addressed in an integrated fashion by all countries, with high priority being given to the needs of the urban and rural poor, the unemployed and the growing number of people without any source of income.

Human settlement objective

7.4. The overall human settlement objective is to improve the social, economic and environmental quality of human settlements and the living and working environments of all people, in particular the urban and rural poor. Such improvement should be based on technical cooperation activities, partnerships among the public, private and community sectors and participation in the decision-making process by community groups and special interest groups such as women, indigenous people, the elderly and the disabled. These approaches should form the core principles of national settlement strategies. In developing these strategies, countries will need to set priorities among

the eight programme areas in this chapter in accordance with their national plans and objectives, taking fully into account their social and cultural capabilities. Furthermore, countries should make appropriate provision to monitor the impact of their strategies on marginalized and disenfranchised groups, with particular reference to the needs of women.

7.5. The programme areas included in this chapter are:

(a) Providing adequate shelter for all;

(b) Improving human settlement management;

(c) Promoting sustainable land-use planning and management;

(d) Promoting the integrated provision of environmental infrastructure: water, sanitation, drainage and solid-waste management;

(e) Promoting sustainable energy and transport systems in human settlements;

(f) Promoting human settlement planning and management in disaster-prone areas;

(g) Promoting sustainable construction industry activities;

(h) Promoting human resource development and capacity-building for human settlement development.

PROGRAMME AREAS

A. Providing adequate shelter for all

Basis for action

7.6. Access to safe and healthy shelter is essential to a person's physical, psychological, social and economic well-being and should be a fundamental part of national and international action. The right to adequate housing as a basic human right is enshrined in the Universal Declaration of Human Rights and the International Covenant on Economic, Social and Cultural Rights. Despite this, it is estimated that at the present time, at least 1 billion people do not have access to safe and healthy shelter and that if appropriate action is not taken, this number will increase dramatically by the end of the century and beyond.

7.7. A major global programme to address this problem is the Global Strategy for Shelter to the Year 2000, adopted by the General Assembly in December 1988 (resolution 43/181, annex). Despite its widespread endorsement, the Strategy needs a much greater level of political and financial support to enable it to reach its goal of facilitating adequate shelter for all by the end of the century and beyond.

Objective

7.8. The objective is to achieve adequate shelter for rapidly growing populations and for the currently deprived urban and rural poor through an enabling approach to shelter development and improvement that is environmentally sound.

Activities

7.9. The following activities should be undertaken:

(a) As a first step towards the goal of providing adequate shelter for all, all countries should take immediate measures to provide shelter to their homeless poor, while the international community and financial institutions should undertake actions to support the efforts of the developing countries to provide shelter to the poor;

(b) All countries should adopt and/or strengthen national shelter strategies, with targets based, as appropriate, on the principles and recommendations contained in the Global Strategy for Shelter to the Year 2000. People should be protected by law against unfair eviction from their homes or land;

(c) All countries should, as appropriate, support the shelter efforts of the urban and rural poor, the unemployed and the no-income group by adopting and/or adapting existing codes and regulations, to facilitate their access to land, finance and low-cost building materials and by actively promoting the regularization and upgrading of informal settlements and urban slums as an expedient measure and pragmatic solution to the urban shelter deficit;

(d) All countries should, as appropriate, facilitate access of urban and rural poor to shelter by adopting and utilizing housing and finance schemes and new innovative mechanisms adapted to their circumstances;

(e) All countries should support and develop environmentally compatible shelter strategies at national, state/provincial and municipal levels through partnerships among the private, public and community sectors and with the support of community-based organizations;

(f) All countries, especially developing ones, should, as appropriate, formulate and implement programmes to reduce the impact of the phenomenon of rural to urban drift by improving rural living conditions;

(g) All countries, where appropriate, should develop and implement resettlement programmes that address the specific problems of displaced populations in their respective countries;

(h) All countries should, as appropriate, document and monitor the implementation of their national shelter strategies by using, inter alia, the monitoring guidelines adopted by the Commission on Human Settlements and the

shelter performance indicators being produced jointly by the United Nations Centre for Human Settlements (Habitat) and the World Bank;

(i) Bilateral and multilateral cooperation should be strengthened in order to support the implementation of the national shelter strategies of developing countries;

(j) Global progress reports covering national action and the support activities of international organizations and bilateral donors should be produced and disseminated on a biennial basis, as requested in the Global Strategy for Shelter to the Year 2000.

Means of implementation

(a) Financing and cost evaluation

7.10. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $75 billion, including about $10 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

7.11. The requirements under this heading are addressed in each of the other programme areas included in the present chapter.

(c) Human resource development and capacity-building

7.12. Developed countries and funding agencies should provide specific assistance to developing countries in adopting an enabling approach to the provision of shelter for all, including the no-income group, and covering research institutions and training activities for government officials, professionals, communities and non-governmental organizations and by strengthening local capacity for the development of appropriate technologies.

B. Improving human settlement management

Basis for action

7.13. By the turn of the century, the majority of the world's population will be living in cities. While urban settlements, particularly in developing countries, are showing many of the symptoms of the global environment and development crisis, they nevertheless generate 60 per cent of gross national product and, if properly managed, can develop the capacity to sustain their productivity, improve the living conditions of their residents and manage natural resources in a sustainable way.

7.14. Some metropolitan areas extend over the boundaries of several political and/or administrative entities (counties and municipalities) even though they conform to a continuous urban system. In many cases this political heterogeneity hinders the implementation of comprehensive environmental management programmes.

Objective

7.15. The objective is to ensure sustainable management of all urban settlements, particularly in developing countries, in order to enhance their ability to improve the living conditions of residents, especially the marginalized and disenfranchised, thereby contributing to the achievement of national economic development goals.

Activities

(a) Improving urban management

7.16. One existing framework for strengthening management is in the United Nations Development Programme/World Bank/United Nations Centre for Human Settlements (Habitat) Urban Management Programme (UMP), a concerted global effort to assist developing countries in addressing urban management issues. Its coverage should be extended to all interested countries during the period 1993-2000. All countries should, as appropriate and in accordance with national plans, objectives and priorities and with the assistance of non-governmental organizations and representatives of local authorities, undertake the following activities at the national, state/provincial and local levels, with the assistance of relevant programmes and support agencies:

(a) Adopting and applying urban management guidelines in the areas of land management, urban environmental management, infrastructure management and municipal finance and administration;

(b) Accelerating efforts to reduce urban poverty through a number of actions, including:

(i) Generating employment for the urban poor, particularly women, through the provision, improvement and maintenance of urban infrastructure and services and the support of economic activities in the informal sector, such as repairs, recycling, services and small commerce;

(ii) Providing specific assistance to the poorest of the urban poor through, inter alia, the creation of social infrastructure in order to reduce hunger and homelessness, and the provision of adequate community services;

(iii) Encouraging the establishment of indigenous community-based organizations, private voluntary organizations and other forms of non-governmental entities that can contribute to the efforts to reduce poverty and improve the quality of life for low-income families;

(c) Adopting innovative city planning strategies to address environmental and social issues by:

(i) Reducing subsidies on, and recovering the full costs of, environmental and other services of high standard (e.g. water supply, sanitation, waste collection, roads, telecommunications) provided to higher income neighbourhoods;

(ii) Improving the level of infrastructure and service provision in poorer urban areas;

(d) Developing local strategies for improving the quality of life and the environment, integrating decisions on land use and land management, investing in the public and private sectors and mobilizing human and material resources, thereby promoting employment generation that is environmentally sound and protective of human health.

(b) Strengthening urban data systems

7.17. During the period 1993-2000 all countries should undertake, with the active participation of the business sector as appropriate, pilot projects in selected cities for the collection, analysis and subsequent dissemination of urban data, including environmental impact analysis, at the local, state/provincial, national and international levels and the establishment of city data management capabilities. 5/ United Nations organizations, such as Habitat, UNEP and UNDP, could provide technical advice and model data management systems.

(c) Encouraging intermediate city development

7.18. In order to relieve pressure on large urban agglomerations of developing countries, policies and strategies should be implemented towards the development of intermediate cities that create employment opportunities for unemployed labour in the rural areas and support rural-based economic activities, although sound urban management is essential to ensure that urban sprawl does not expand resource degradation over an ever wider land area and increase pressures to convert open space and agricultural/buffer lands for development.

7.19. Therefore all countries should, as appropriate, conduct reviews of urbanization processes and policies in order to assess the environmental impacts of growth and apply urban planning and management approaches specifically suited to the needs, resource capabilities and characteristics of their growing intermediate-sized cities. As appropriate, they should also

concentrate on activities aimed at facilitating the transition from rural to urban lifestyles and settlement patterns and at promoting the development of small-scale economic activities, particularly the production of food, to support local income generation and the production of intermediate goods and services for rural hinterlands.

7.20. All cities, particularly those characterized by severe sustainable development problems, should, in accordance with national laws, rules and regulations, develop and strengthen programmes aimed at addressing such problems and guiding their development along a sustainable path. Some international initiatives in support of such efforts, as in the Sustainable Cities Programme of Habitat and the Healthy Cities Programme of WHO, should be intensified. Additional initiatives involving the World Bank, the regional development banks and bilateral agencies, as well as other interested stakeholders, particularly international and national representatives of local authorities, should be strengthened and coordinated. Individual cities should, as appropriate:

(a) Institutionalize a participatory approach to sustainable urban development, based on a continuous dialogue between the actors involved in urban development (the public sector, private sector and communities), especially women and indigenous people;

(b) Improve the urban environment by promoting social organization and environmental awareness through the participation of local communities in the identification of public services needs, the provision of urban infrastructure, the enhancement of public amenities and the protection and/or rehabilitation of older buildings, historic precincts and other cultural artifacts. In addition, "green works" programmes should be activated to create self-sustaining human development activities and both formal and informal employment opportunities for low-income urban residents;

(c) Strengthen the capacities of their local governing bodies to deal more effectively with the broad range of developmental and environmental challenges associated with rapid and sound urban growth through comprehensive approaches to planning that recognize the individual needs of cities and are based on ecologically sound urban design practices;

(d) Participate in international "sustainable city networks" to exchange experiences and mobilize national and international technical and financial support;

(e) Promote the formulation of environmentally sound and culturally sensitive tourism programmes as a strategy for sustainable development of urban and rural settlements and as a way of decentralizing urban development and reducing discrepancies among regions;

(f) Establish mechanisms, with the assistance of relevant international agencies, to mobilize resources for local initiatives to improve environmental quality;

(g) Empower community groups, non-governmental organizations and individuals to assume the authority and responsibility for managing and enhancing their immediate environment through participatory tools, techniques and approaches embodied in the concept of environmental care.

7.21. Cities of all countries should reinforce cooperation among themselves and cities of the developed countries, under the aegis of non-governmental organizations active in this field, such as the International Union of Local Authorities (IULA), the International Council for Local Environmental Initiatives (ICLEI) and the World Federation of Twin Cities.

Means of implementation

(a) Financing and cost evaluation

7.22. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $100 billion, including about $15 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Human resource development and capacity-building

7.23. Developing countries should, with appropriate international assistance, consider focusing on training and developing a cadre of urban managers, technicians, administrators and other relevant stakeholders who can successfully manage environmentally sound urban development and growth and are equipped with the skills necessary to analyse and adapt the innovative experiences of other cities. For this purpose, the full range of training methods - from formal education to the use of the mass media - should be utilized, as well as the "learning by doing" option.

7.24. Developing countries should also encourage technological training and research through joint efforts by donors, non-governmental organizations and private business in such areas as the reduction of waste, water quality, saving of energy, safe production of chemicals and less polluting transportation.

7.25. Capacity-building activities carried out by all countries, assisted as suggested above, should go beyond the training of individuals and functional groups to include institutional arrangements, administrative routines, inter-agency linkages, information flows and consultative processes.

7.26. In addition, international efforts, such as the Urban Management Programme, in cooperation with multilateral and bilateral agencies, should continue to assist the developing countries in their efforts to develop a participatory structure by mobilizing the human resources of the private

sector, non-governmental organizations and the poor, particularly women and the disadvantaged.

C. Promoting sustainable land-use planning and management

Basis for action

7.27. Access to land resources is an essential component of sustainable low-impact lifestyles. Land resources are the basis for (human) living systems and provide soil, energy, water and the opportunity for all human activity. In rapidly growing urban areas, access to land is rendered increasingly difficult by the conflicting demands of industry, housing, commerce, agriculture, land tenure structures and the need for open spaces. Furthermore, the rising costs of urban land prevent the poor from gaining access to suitable land. In rural areas, unsustainable practices, such as the exploitation of marginal lands and the encroachment on forests and ecologically fragile areas by commercial interests and landless rural populations, result in environmental degradation, as well as in diminishing returns for impoverished rural settlers.

Objective

7.28. The objective is to provide for the land requirements of human settlement development through environmentally sound physical planning and land use so as to ensure access to land to all households and, where appropriate, the encouragement of communally and collectively owned and managed land. 6/ Particular attention should be paid to the needs of women and indigenous people for economic and cultural reasons.

Activities

7.29. All countries should consider, as appropriate, undertaking a comprehensive national inventory of their land resources in order to establish a land information system in which land resources will be classified according to their most appropriate uses and environmentally fragile or disaster-prone areas will be identified for special protection measures.

7.30. Subsequently, all countries should consider developing national land-resource management plans to guide land-resource development and utilization and, to that end, should:

(a) Establish, as appropriate, national legislation to guide the implementation of public policies for environmentally sound urban development, land utilization, housing and for the improved management of urban expansion;

(b) Create, where appropriate, efficient and accessible land markets that meet community development needs by, inter alia, improving land registry systems and streamlining procedures in land transactions;

(c) Develop fiscal incentives and land-use control measures, including land-use planning solutions for a more rational and environmentally sound use of limited land resources;

(d) Encourage partnerships among the public, private and community sectors in managing land resources for human settlements development;

(e) Strengthen community-based land-resource protection practices in existing urban and rural settlements;

(f) Establish appropriate forms of land tenure that provide security of tenure for all land-users, especially indigenous people, women, local communities, the low-income urban dwellers and the rural poor;

(g) Accelerate efforts to promote access to land by the urban and rural poor, including credit schemes for the purchase of land and for building/acquiring or improving safe and healthy shelter and infrastructure services;

(h) Develop and support the implementation of improved land-management practices that deal comprehensively with potentially competing land requirements for agriculture, industry, transport, urban development, green spaces, preserves and other vital needs;

(i) Promote understanding among policy makers of the adverse consequences of unplanned settlements in environmentally vulnerable areas and of the appropriate national and local land-use and settlements policies required for this purpose.

7.31. At the international level, global coordination of land-resource management activities should be strengthened by the various bilateral and multilateral agencies and programmes, such as UNDP, FAO, the World Bank, the regional development banks, other interested organizations and the UNDP/World Bank/Habitat Urban Management Programme, and action should be taken to promote the transfer of applicable experience on sustainable land-management practices to and among developing countries.

Means of implementation

(a) Financing and cost evaluation

7.32. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $3 billion, including about $300 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

7.33. All countries, particularly developing countries, alone or in regional or subregional groupings, should be given access to modern techniques of land-resource management, such as geographical information systems, satellite photography/imagery and other remote-sensing technologies.

(c) Human resource development and capacity-building

7.34. Environmentally focused training activities in sustainable land-resources planning and management should be undertaken in all countries, with developing countries being given assistance through international support and funding agencies in order to:

(a) Strengthen the capacity of national, state/provincial and local educational research and training institutions to provide formal training of land-management technicians and professionals;

(b) Facilitate the organizational review of government ministries and agencies responsible for land questions, in order to devise more efficient mechanisms of land-resource management, and carry out periodic in-service refresher courses for the managers and staff of such ministries and agencies in order to familiarize them with up-to-date land-resource-management technologies;

(c) Where appropriate, provide such agencies with modern equipment, such as computer hardware and software and survey equipment;

(d) Strengthen existing programmes and promote an international and interregional exchange of information and experience in land management through the establishment of professional associations in land-management sciences and related activities, such as workshops and seminars.

D. Promoting the integrated provision of environmental infrastructure: water, sanitation, drainage and solid-waste management

Basis for action

7.35. The sustainability of urban development is defined by many parameters relating to the availability of water supplies, air quality and the provision of environmental infrastructure for sanitation and waste management. As a result of the density of users, urbanization, if properly managed, offers unique opportunities for the supply of sustainable environmental infrastructure through adequate pricing policies, educational programmes and equitable access mechanisms that are economically and environmentally sound. In most developing countries, however, the inadequacy and lack of environmental infrastructure is responsible for widespread ill-health and a large number of preventable deaths each year. In those countries conditions

are set to worsen due to growing needs that exceed the capacity of Governments to respond adequately.

7.36. An integrated approach to the provision of environmentally sound infrastructure in human settlements, in particular for the urban and rural poor, is an investment in sustainable development that can improve the quality of life, increase productivity, improve health and reduce the burden of investments in curative medicine and poverty alleviation.

7.37. Most of the activities whose management would be improved by an integrated approach, are covered in Agenda 21 as follows: chapter 6 (Protecting and promoting human health conditions), chapters 9 (Protecting the atmosphere), 18 (Protecting the quality and supply of freshwater resources) and 21 (Environmentally sound management of solid wastes and sewage-related issues).

Objective

7.38. The objective is to ensure the provision of adequate environmental infrastructure facilities in all settlements by the year 2025. The achievement of this objective would require that all developing countries incorporate in their national strategies programmes to build the necessary technical, financial and human resource capacity aimed at ensuring better integration of infrastructure and environmental planning by the year 2000.

Activities

7.39. All countries should assess the environmental suitability of infrastructure in human settlements, develop national goals for sustainable management of waste, and implement environmentally sound technology to ensure that the environment, human health and quality of life are protected. Settlement infrastructure and environmental programmes designed to promote an integrated human settlements approach to the planning, development, maintenance and management of environmental infrastructure (water supply, sanitation, drainage, solid-waste management) should be strengthened with the assistance of bilateral and multilateral agencies. Coordination among these agencies and with collaboration from international and national representatives of local authorities, the private sector and community groups should also be strengthened. The activities of all agencies engaged in providing environmental infrastructure should, where possible, reflect an ecosystem or metropolitan area approach to settlements and should include monitoring, applied research, capacity-building, transfer of appropriate technology and technical cooperation among the range of programme activities.

7.40. Developing countries should be assisted at the national and local levels in adopting an integrated approach to the provision of water supply, energy, sanitation, drainage and solid-waste management, and external funding agencies should ensure that this approach is applied in particular to environmental infrastructure improvement in informal settlements based on regulations and standards that take into account the living conditions and resources of the communities to be served.

7.41. All countries should, as appropriate, adopt the following principles for the provision of environmental infrastructure:

(a) Adopt policies that minimize if not altogether avoid environmental damage, whenever possible;

(b) Ensure that relevant decisions are preceded by environmental impact assessments and also take into account the costs of any ecological consequences;

(c) Promote development in accordance with indigenous practices and adopt technologies appropriate to local conditions;

(d) Promote policies aimed at recovering the actual cost of infrastructure services, while at the same time recognizing the need to find suitable approaches (including subsidies) to extend basic services to all households;

(e) Seek joint solutions to environmental problems that affect several localities.

7.42. The dissemination of information from existing programmes should be facilitated and encouraged among interested countries and local institutions.

Means of implementation

(a) Financing and cost evaluation

7.43. The Conference secretariat has estimated most of the costs of implementing the activities of this programme in other chapters. The secretariat estimates the average total annual cost (1993-2000) of technical assistance from the international community grant or concessional terms to be about $50 million. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

7.44. Scientific and technological means within the existing programmes should be coordinated wherever possible and should:

(a) Accelerate research in the area of integrated policies of environmental infrastructure programmes and projects based on cost/benefit analysis and overall environmental impact;

(b) Promote methods of assessing "effective demand", utilizing environment and development data as criteria for selecting technology.

(c) Human resource development and capacity-building

7.45. With the assistance and support of funding agencies, all countries should, as appropriate, undertake training and popular participation programmes aimed at:

(a) Raising awareness of the means, approaches and benefits of the provision of environmental infrastructure facilities, especially among indigenous people, women, low-income groups and the poor;

(b) Developing a cadre of professionals with adequate skills in integrated infrastructural service planning and maintenance of resource-efficient, environmentally sound and socially acceptable systems;

(c) Strengthening the institutional capacity of local authorities and administrators in the integrated provision of adequate infrastructure services in partnership with local communities and the private sector;

(d) Adopting appropriate legal and regulatory instruments, including cross-subsidy arrangements, to extend the benefits of adequate and affordable environmental infrastructure to unserved population groups, especially the poor.

E. Promoting sustainable energy and transport systems in human settlements

Basis for action

7.46. Most of the commercial and non-commercial energy produced today is used in and for human settlements, and a substantial percentage of it is used by the household sector. Developing countries are at present faced with the need to increase their energy production to accelerate development and raise the living standards of their populations, while at the same time reducing energy production costs and energy-related pollution. Increasing the efficiency of energy use to reduce its polluting effects and to promote the use of renewable energies must be a priority in any action taken to protect the urban environment.

7.47. Developed countries, as the largest consumers of energy, are faced with the need for energy planning and management, promoting renewable and alternate sources of energy, and evaluating the life-cycle costs of current systems and practices as a result of which many metropolitan areas are suffering from pervasive air quality problems related to ozone, particulate matters and carbon monoxide. The causes have much to do with technological inadequacies and with an increasing fuel consumption generated by inefficiencies, high demographic and industrial concentrations and a rapid expansion in the number of motor vehicles.

7.48. Transport accounts for about 30 per cent of commercial energy consumption and for about 60 per cent of total global consumption of liquid petroleum. In developing countries, rapid motorization and insufficient investments in urban-transport planning, traffic management and infrastructure, are creating increasing problems in terms of accidents and injury, health, noise, congestion and loss of productivity similar to those occurring in many developed countries. All of these problems have a severe impact on urban populations, particularly the low-income and no-income groups.

Objectives

7.49. The objectives are to extend the provision of more energy-efficient technology and alternative/renewable energy for human settlements and to reduce negative impacts of energy production and use on human health and on the environment.

Activities

7.50. The principal activities relevant to this programme area are included in chapter 9 (Protection of the atmosphere), programme area B, subprogramme 1 (Energy development, efficiency and consumption) and subprogramme 2 (Transportation).

7.51. A comprehensive approach to human settlements development should include the promotion of sustainable energy development in all countries, as follows:

(a) Developing countries, in particular, should:

(i) Formulate national action programmes to promote and support reafforestation and national forest regeneration with a view to achieving sustained provision of the biomass energy needs of the low-income groups in urban areas and the rural poor, in particular women and children;

(ii) Formulate national action programmes to promote integrated development of energy-saving and renewable energy technologies, particularly for the use of solar, hydro, wind and biomass sources;

(iii) Promote wide dissemination and commercialization of renewable energy technologies through suitable measures, inter alia, fiscal and technology transfer mechanisms;

(iv) Carry out information and training programmes directed at manufacturers and users in order to promote energy-saving techniques and energy-efficient appliances;

(b) International organizations and bilateral donors should:

(i) Support developing countries in implementing national energy programmes in order to achieve widespread use of energy-saving and renewable energy technologies, particularly the use of solar, wind, biomass and hydro sources;

(ii) Provide access to research and development results to increase energy-use efficiency levels in human settlements.

7.52. Promoting efficient and environmentally sound urban transport systems in all countries should be a comprehensive approach to urban-transport planning and management. To this end, all countries should:

(a) Integrate land-use and transportation planning to encourage development patterns that reduce transport demand;

(b) Adopt urban-transport programmes favouring high-occupancy public transport in countries, as appropriate;

(c) Encourage non-motorized modes of transport by providing safe cycleways and footways in urban and suburban centres in countries, as appropriate;

(d) Devote particular attention to effective traffic management, efficient operation of public transport and maintenance of transport infrastructure;

(e) Promote the exchange of information among countries and representatives of local and metropolitan areas;

(f) Re-evaluate the present consumption and production patterns in order to reduce the use of energy and national resources.

Means of implementation

(a) Financing and cost evaluation

7.53. The Conference secretariat has estimated the costs of implementing the activities of this programme in chapter 9 (Protection of the atmosphere).

(b) Human resource development and capacity-building

7.54. In order to enhance the skills of energy service and transport professionals and institutions, all countries should, as appropriate:

(a) Provide on-the-job and other training of government officials, planners, traffic engineers and managers involved in the energy-service and transport section;

(b) Raise public awareness of the environmental impacts of transport and travel behaviour through mass media campaigns and support for non-governmental and community initiatives promoting the use of non-motorized transport, shared driving and improved traffic safety measures;

(c) Strengthen regional, national, state/provincial, and private sector institutions that provide education and training on energy service and urban transport planning and management.

F. Promoting human settlement planning and management in disaster-prone areas

Basis for action

7.55. Natural disasters cause loss of life, disruption of economic activities and urban productivity, particularly for highly susceptible low-income groups, and environmental damage, such as loss of fertile agricultural land and contamination of water resources, and can lead to major resettlement of populations. Over the past two decades, they are estimated to have caused some 3 million deaths and affected 800 million people. Global economic losses have been estimated by the Office of the United Nations Disaster Relief Coordinator to be in the range of $30-50 billion per year.

7.56. The General Assembly, in resolution 44/236, proclaimed the 1990s as the International Decade for Natural Disaster Reduction. The goals of the Decade 7/ bear relevance to the objectives of the present programme area.

7.57. In addition, there is an urgent need to address the prevention and reduction of man-made disasters and/or disasters caused by, inter alia, industries, unsafe nuclear power generation and toxic wastes (see chapter 6 of Agenda 21).

Objective

7.58. The objective is to enable all countries, in particular those that are disaster-prone, to mitigate the negative impact of natural and man-made disasters on human settlements, national economies and the environment.

Activities

7.59. Three distinct areas of activity are foreseen under this programme area, namely, the development of a "culture of safety", pre-disaster planning and post-disaster reconstruction.

(a) Developing a culture of safety

7.60. To promote a "culture of safety" in all countries, especially those that are disaster-prone, the following activities should be carried out:

(a) Completing national and local studies on the nature and occurrence of natural disasters, their impact on people and economic activities, the effects of inadequate construction and land use in hazard-prone areas, and the social and economic advantages of adequate pre-disaster planning;

(b) Implementing nationwide and local awareness campaigns through all available media, translating the above knowledge into information easily comprehensible to the general public and to the populations directly exposed to hazards;

(c) Strengthening, and/or developing global, regional, national and local early warning systems to alert populations to impending disasters;

(d) Identifying industrially based environmental disaster areas at the national and international levels and implementing strategies aimed at the rehabilitation of these areas through, inter alia:

(i) Restructuring of the economic activities and promoting new job opportunities in environmentally sound sectors;

(ii) Promoting close collaboration between governmental and local authorities, local communities and non-governmental organizations and private business;

(iii) Developing and enforcing strict environmental control standards.

(b) Developing pre-disaster planning

7.61. Pre-disaster planning should form an integral part of human settlement planning in all countries. The following should be included:

(a) Undertaking complete multi-hazard research into risk and vulnerability of human settlements and settlement infrastructure, including water and sewerage, communication and transportation networks, as one type of risk reduction may increase vulnerability to another (e.g., an earthquake-resistant house made of wood will be more vulnerable to wind storms);

(b) Developing methodologies for determining risk and vulnerability within specific human settlements and incorporating risk and vulnerability reduction into the human settlement planning and management process;

(c) Redirecting inappropriate new development and human settlements to areas not prone to hazards;

(d) Preparing guidelines on location, design and operation of potentially hazardous industries and activities;

(e) Developing tools (legal, economic etc.) to encourage disaster-sensitive development, including means of ensuring that limitations on development options are not punitive to owners, or incorporate alternative means of compensation;

(f) Further developing and disseminating information on disaster-resistant building materials and construction technologies for buildings and public works in general;

(g) Developing training programmes for contractors and builders on disaster-resistant construction methods. Some programmes should be directed particularly to small enterprises, which build the great majority of housing and other small buildings in the developing countries, as well as to the rural populations, which build their own houses;

(h) Developing training programmes for emergency site managers, non-governmental organizations and community groups which cover all aspects of disaster mitigation, including urban search and rescue, emergency communications, early warning techniques, and pre-disaster planning;

(i) Developing procedures and practices to enable local communities to receive information about hazardous installations or situations in these areas, and facilitate their participation in early warning and disaster abatement and response procedures and plans;

(j) Preparing action plans for the reconstruction of settlements, especially the reconstruction of community life-lines.

(c) Initiating post-disaster reconstruction and rehabilitation planning

7.62. The international community, as a major partner in post-reconstruction and rehabilitation, should ensure that the countries involved derive the greatest benefits from the funds allocated by undertaking the following activities:

(a) Carrying out research on past experiences on the social and economic aspects of post-disaster reconstruction and adopting effective strategies and guidelines for post-disaster reconstruction, with particular focus on development-focused strategies in the allocation of scarce reconstruction resources, and on the opportunities that post-disaster reconstruction provides to introduce sustainable settlement patterns;

(b) Preparing and disseminating international guidelines for adaptation to national and local needs;

(c) Supporting efforts of national Governments to initiate contingency planning, with participation of affected communities, for post-disaster reconstruction and rehabilitation.

Means of implementation

(a) Financing and cost evaluation

7.63. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $50 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

7.64. Scientists and engineers specializing in this field in both developing and developed countries should collaborate with urban and regional planners in order to provide the basic knowledge and means to mitigate losses owing to disasters as well as environmentally inappropriate development.

(c) Human resource development and capacity-building

7.65. Developing countries should conduct training programmes on disaster-resistant construction methods for contractors and builders, who build the majority of housing in the developing countries. This should focus on the small business enterprises, which build the majority of housing in the developing countries.

7.66. Training programmes should be extended to government officials and planners and community and non-governmental organizations to cover all aspects of disaster mitigation, such as early warning techniques, pre-disaster planning and construction, post-disaster construction and rehabilitation.

G. Promoting sustainable construction industry activities

Basis for action

7.67. The activities of the construction sector are vital to the achievement of the national socio-economic development goals of providing shelter, infrastructure and employment. However, they can be a major source of environmental damage through depletion of the natural resource base, degradation of fragile eco-zones, chemical pollution and the use of building materials harmful to human health.

Objectives

7.68. The objectives are, first, to adopt policies and technologies and to exchange information on them in order to enable the construction sector to meet human settlement development goals, while avoiding harmful side-effects

on human health and on the biosphere, and, second, to enhance the employment-generation capacity of the construction sector. Governments should work in close collaboration with the private sector in achieving these objectives.

Activities

7.69. All countries should, as appropriate and in accordance with national plans, objectives and priorities:

(a) Establish and strengthen indigenous building materials industry, based, as much as possible, on inputs of locally available natural resources;

(b) Formulate programmes to enhance the utilization of local materials by the construction sector by expanding technical support and incentive schemes for increasing the capabilities and economic viability of small-scale and informal operatives which make use of these materials and traditional construction techniques;

(c) Adopt standards and other regulatory measures which promote the increased use of energy-efficient designs and technologies and sustainable utilization of natural resources in an economically and environmentally appropriate way;

(d) Formulate appropriate land-use policies and introduce planning regulations specially aimed at the protection of eco-sensitive zones against physical disruption by construction and construction-related activities;

(e) Promote the use of labour-intensive construction and maintenance technologies which generate employment in the construction sector for the underemployed labour force found in most large cities, while at the same time promoting the development of skills in the construction sector;

(f) Develop policies and practices to reach the informal sector and self-help housing builders by adopting measures to increase the affordability of building materials on the part of the urban and rural poor, through, inter alia, credit schemes and bulk procurement of building materials for sale to small-scale builders and communities.

7.70. All countries should:

(a) Promote the free exchange of information on the entire range of environmental and health aspects of construction, including the development and dissemination of databases on the adverse environmental effects of building materials through the collaborative efforts of the private and public sectors;

(b) Promote the development and dissemination of databases on the adverse environmental and health effects of building materials and introduce legislation and financial incentives to promote recycling of energy-intensive

materials in the construction industry and conservation of waste energy in building-materials production methods;

(c) Promote the use of economic instruments, such as product charges, to discourage the use of construction materials and products that create pollution during their life cycle;

(d) Promote information exchange and appropriate technology transfer among all countries, with particular attention to developing countries, for resource management in construction, particularly for non-renewable resources;

(e) Promote research in construction industries and related activities, and establish and strengthen institutions in this sector.

Means of implementation

(a) Financing and cost evaluation

7.71. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $40 billion, including about $4 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Human resource development and capacity-building

7.72. Developing countries should be assisted by international support and funding agencies in upgrading the technical and managerial capacities of the small entrepreneur and the vocational skills of operatives and supervisors in the building materials industry, using a variety of training methods. These countries should also be assisted in developing programmes to encourage the use of non-waste and clean technologies through appropriate transfer of technology.

7.73. General education programmes should be developed in all countries, as appropriate, to increase builder awareness of available sustainable technologies.

7.74. Local authorities are called upon to play a pioneering role in promoting the increased use of environmentally sound building materials and construction technologies, e.g., by pursuing an innovative procurement policy.

H. Promoting human resource development and capacity-building for human settlements development

Basis for action

7.75. Most countries, in addition to shortcomings in the availability of specialized expertise in the areas of housing, settlement management, land management, infrastructure, construction, energy, transport, and pre-disaster planning and reconstruction, face three cross-sectoral human resource development and capacity-building shortfalls. First is the absence of an enabling policy environment capable of integrating the resources and activities of the public sector, the private sector and the community, or social sector; second is the weakness of specialized training and research institutions; and third is the insufficient capacity for technical training and assistance for low-income communities, both urban and rural.

Objective

7.76. The objective is to improve human resource development and capacity-building in all countries by enhancing the personal and institutional capacity of all actors, particularly indigenous people and women, involved in human settlement development. In this regard, account should be taken of traditional cultural practices of indigenous people and their relationship to the environment.

Activities

7.77. Specific human resource development and capacity-building activities have been built into each of the programme areas of this chapter. More generally, however, additional steps should be taken to reinforce those activities. In order to do so, all countries, as appropriate, should take the following action:

(a) Strengthening the development of human resources and of capacities of public sector institutions through technical assistance and international cooperation so as to achieve by the year 2000 substantial improvement in the efficiency of governmental activities;

(b) Creating an enabling policy environment supportive of the partnership between the public, private and community sectors;

(c) Providing enhanced training and technical assistance to institutions providing training for technicians, professionals and administrators, and appointed, elected and professional members of local governments and strengthening their capacity to address priority training needs, particularly in regard to social, economic and environmental aspects of human settlements development;

(d) Providing direct assistance for human settlement development at the community level, *inter alia*, by:

(i) Strengthening and promoting programmes for social mobilization and raising awareness of the potential of women and youth in human settlements activities;

(ii) Facilitating coordination of the activities of women, youth, community groups and non-governmental organizations in human settlements development;

(iii) Promoting research on women's programmes and other groups, and evaluating progress made with a view to identifying bottlenecks and needed assistance;

(e) Promoting the inclusion of integrated environmental management into general local government activities.

7.78. Both international organizations and non-governmental organizations should support the above activities by, inter alia, strengthening subregional training institutions, providing updated training materials and disseminating the results of successful human resource and capacity-building activities, programmes and projects.

Means of implementation

(a) Financing and cost evaluation

7.79. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $65 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

7.80. Both formal training and non-formal types of human resource development and capacity-building programmes should be combined, and use should be made of user-oriented training methods, up-to-date training materials and modern audio-visual communication systems.

Notes

1/ No aggregate figures are available on internal expenditure or official development assistance on human settlements. However, data available in the World Development Report, 1991, for 16 low-income developing countries show that the percentage of central government expenditure on housing, amenities and social security and welfare for 1989 averaged 5.6 per cent, with a high of 15.1 per cent in the case of Sri Lanka, which has embarked on a

vigorous housing programme. In OECD industrialized countries, during the same year, the percentage of central government expenditure on housing, amenities and social security and welfare ranged from a minimum of 29.3 per cent to a maximum of 49.4 per cent, with an average of 39 per cent (World Bank, World Development Report, 1991, World Development Indicators, table 11 (Washington, D.C., 1991)).

2/ See the report of the Director-General for Development and International Economic Cooperation containing preliminary statistical data on operational activities of the United Nations system for 1988 (A/44/324-E/1989/106/Add.4, annex).

3/ World Bank, Annual Report, 1991 (Washington, D.C., 1991).

4/ UNDP, "Reported investment commitments related to UNDP-assisted projects, 1988", table 1, "Sectoral distribution of investment commitment in 1988-1989".

5/ A pilot programme of this type, the City Data Programme (CDP), is already in operation in the United Nations Centre on Human Settlements (Habitat) aimed at the production and dissemination to participating cities of microcomputer application software designed to store, process and retrieve city data for local, national and international exchange and dissemination.

6/ This calls for integrated land-resource management policies, which are also addressed in chapter 10 of Agenda 21 (Integrated approach to planning and management of land resources).

7/ The goals of the International Decade for Natural Disaster Reduction, set out in the annex to General Assembly resolution 44/236, are as follows:

(a) To improve the capacity of each country to mitigate the effects of natural disasters expeditiously and effectively, paying special attention to assisting developing countries in the assessment of disaster damage potential and in the establishment of early warning systems and disaster-resistant structures when and where needed;

(b) To devise appropriate guidelines and strategies for applying existing scientific and technical knowledge, taking into account the cultural and economic diversity among nations;

(c) To foster scientific and engineering endeavours aimed at closing critical gaps in knowledge in order to reduce loss of life and property;

(d) To disseminate existing and new technical information related to measures for the assessment, prediction and mitigation of natural disasters;

(e) To develop measures for the assessment, prediction, prevention and mitigation of natural disasters through programmes of technical assistance and technology transfer, demonstration projects, and education and training, tailored to specific disasters and locations, and to evaluate the effectiveness of those programmes.

Chapter 8

INTEGRATING ENVIRONMENT AND DEVELOPMENT IN DECISION-MAKING

INTRODUCTION

8.1. This chapter contains the following programme areas:

(a) Integrating environment and development at the policy, planning and management levels;

(b) Providing an effective legal and regulatory framework;

(c) Making effective use of economic instruments and market and other incentives;

(d) Establishing systems for integrated environmental and economic accounting.

PROGRAMME AREAS

A. Integrating environment and development at the policy, planning and management levels

Basis for action

8.2. Prevailing systems for decision-making in many countries tend to separate economic, social and environmental factors at the policy, planning and management levels. This influences the actions of all groups in society, including Governments, industry and individuals, and has important implications for the efficiency and sustainability of development. An adjustment or even a fundamental reshaping of decision-making, in the light of country-specific conditions, may be necessary if environment and development is to be put at the centre of economic and political decision-making, in effect achieving a full integration of these factors. In recent years, some Governments have also begun to make significant changes in the institutional structures of government in order to enable more systematic consideration of the environment when decisions are made on economic, social, fiscal, energy, agricultural, transportation, trade and other policies, as well as the implications of policies in these areas for the environment. New forms of dialogue are also being developed for achieving better integration among national and local government, industry, science, environmental groups and the public in the process of developing effective approaches to environment and development. The responsibility for bringing about changes lies with Governments in partnership with the private sector and local authorities, and in collaboration with national, regional and international organizations, including in particular UNEP, UNDP and the World Bank. Exchange of experience between countries can also be significant. National plans, goals and

objectives, national rules, regulations and law, and the specific situation in which different countries are placed are the overall framework in which such integration takes place. In this context, it must be borne in mind that environmental standards may pose severe economic and social costs if they are uniformly applied in developing countries.

Objectives

8.3. The overall objective is to improve or restructure the decision-making process so that consideration of socio-economic and environmental issues is fully integrated and a broader range of public participation assured. Recognizing that countries will develop their own priorities in accordance with their prevailing conditions, needs, national plans, policies and programmes, the following objectives are proposed:

(a) To conduct a national review of economic, sectoral and environmental policies, strategies and plans to ensure the progressive integration of environmental and developmental issues;

(b) To strengthen institutional structures to allow the full integration of environmental and developmental issues, at all levels of decision-making;

(c) To develop or improve mechanisms to facilitate the involvement of concerned individuals, groups and organizations in decision-making at all levels;

(d) To establish domestically determined procedures to integrate environment and development issues in decision-making.

Activities

(a) Improving decision-making processes

8.4. The primary need is to integrate environmental and developmental decision-making processes. To do this, Governments should conduct a national review and, where appropriate, improve the processes of decision-making so as to achieve the progressive integration of economic, social and environmental issues in the pursuit of development that is economically efficient, socially equitable and responsible and environmentally sound. Countries will develop their own priorities in accordance with their national plans, policies and programmes for the following activities:

(a) Ensuring the integration of economic, social and environmental considerations in decision-making at all levels and in all ministries;

(b) Adopting a domestically formulated policy framework that reflects a long-term perspective and cross-sectoral approach as the basis for decisions, taking account of the linkages between and within the various political, economic, social and environmental issues involved in the development process;

(c) Establishing domestically determined ways and means to ensure the coherence of sectoral, economic, social and environmental policies, plans and policy instruments, including fiscal measures and the budget; these mechanisms should apply at various levels and bring together those interested in the development process;

(d) Monitoring and evaluating the development process systematically, conducting regular reviews of the state of human resources development, economic and social conditions and trends, the state of the environment and natural resources; this could be complemented by annual environment and development reviews, with a view to assessing sustainable development achievements by the various sectors and departments of government;

(e) Ensuring transparency of, and accountability for, the environmental implications of economic and sectoral policies;

(f) Ensuring access by the public to relevant information, facilitating the reception of public views and allowing for effective participation.

(b) Improving planning and management systems

8.5. To support a more integrated approach to decision-making, the data systems and analytical methods used to support such decision-making processes may need to be improved. Governments, in collaboration, where appropriate, with national and international organizations, should review the status of the planning and management system and, where necessary, modify and strengthen procedures so as to facilitate the integrated consideration of social, economic and environmental issues. Countries will develop their own priorities in accordance with their national plans, policies and programmes for the following activities:

(a) Improving the use of data and information at all stages of planning and management, making systematic and simultaneous use of social, economic, developmental, ecological and environmental data; analysis should stress interactions and synergisms; a broad range of analytical methods should be encouraged so as to provide various points of view;

(b) Adopting comprehensive analytical procedures for prior and simultaneous assessment of the impacts of decisions, including the impacts within and among the economic, social and environmental spheres; these procedures should extend beyond the project level to policies and programmes; analysis should also include assessment of costs, benefits and risks;

(c) Adopting flexible and integrative planning approaches that allow the consideration of multiple goals and enable adjustment of changing needs; integrative area approaches at the ecosystem or watershed level can assist in this approach;

(d) Adopting integrated management systems, particularly for the management of natural resources; traditional or indigenous methods should be studied and considered wherever they have proved effective; women's traditional roles should not be marginalized as a result of the introduction of new management systems;

(e) Adopting integrated approaches to sustainable development at the regional level, including transboundary areas, subject to the requirements of particular circumstances and needs;

(f) Using policy instruments (legal/regulatory and economic) as a tool for planning and management, seeking incorporation of efficiency criteria in decisions; instruments should be regularly reviewed and adapted to ensure that they continue to be effective;

(g) Delegating planning and management responsibilities to the lowest level of public authority consistent with effective action; in particular the advantages of effective and equitable opportunities for participation by women should be discussed;

(h) Establishing procedures for involving local communities in contingency planning for environmental and industrial accidents, and maintaining an open exchange of information on local hazards.

(c) Data and information

8.6. Countries could develop systems for monitoring and evaluation of progress towards achieving sustainable development by adopting indicators that measure changes across economic, social and environmental dimensions.

(d) Adopting a national strategy for sustainable development

8.7. Governments, in cooperation, where appropriate, with international organizations, should adopt a national strategy for sustainable development based on, inter alia, the implementation of decisions taken at the Conference, particularly in respect of Agenda 21. This strategy should build upon and harmonize the various sectoral economic, social and environmental policies and plans that are operating in the country. The experience gained through existing planning exercises such as national reports for the Conference, national conservation strategies and environment action plans should be fully used and incorporated into a country-driven sustainable development strategy. Its goals should be to ensure socially responsible economic development while protecting the resource base and the environment for the benefit of future generations. It should be developed through the widest possible participation. It should be based on a thorough assessment of the current situation and initiatives.

Means of implementation

(a) Financing and cost evaluation

8.8. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $50 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Researching environment and development interactions

8.9. Governments, in collaboration with the national and international scientific community and in cooperation with international organizations, as appropriate, should intensify efforts to clarify the interactions between and within social, economic and environmental considerations. Research should be undertaken with the explicit objective of assisting policy decisions and providing recommendations on improving management practices.

(c) Enhancing education and training

8.10. Countries, in cooperation, where appropriate, with national, regional or international organizations, should ensure that essential human resources exist, or be developed, to undertake the integration of environment and development at various stages of the decision-making and implementation process. To do this, they should improve education and technical training, particularly for women and girls, by including interdisciplinary approaches, as appropriate, in technical, vocational, university and other curricula. They should also undertake systematic training of government personnel, planners and managers on a regular basis, giving priority to the requisite integrative approaches and planning and management techniques that are suited to country-specific conditions.

(d) Promoting public awareness

8.11. Countries, in cooperation with national institutions and groups, the media and the international community, should promote awareness in the public at large, as well as in specialized circles, of the importance of considering environment and development in an integrated manner, and should establish mechanisms for facilitating a direct exchange of information and views with the public. Priority should be given to highlighting the responsibilities and potential contributions of different social groups.

(e) Strengthen national institutional capacity

8.12. Governments, in cooperation, where appropriate, with international organizations, should strengthen national institutional capability and capacity to integrate social, economic, developmental and environmental issues

at all levels of development decision-making and implementation. Attention should be given to moving away from narrow sectoral approaches, progressing towards full cross-sectoral coordination and cooperation.

B. Providing an effective legal and regulatory framework

Basis for action

8.13. Laws and regulations suited to country-specific conditions are among the most important instruments for transforming environment and development policies into action, not only through "command and control" methods, but also as a normative framework for economic planning and market instruments. Yet, although the volume of legal texts in this field is steadily increasing, much of the law-making in many countries seems to be ad hoc and piecemeal, or has not been endowed with the necessary institutional machinery and authority for enforcement and timely adjustment.

8.14. While there is continuous need for law improvement in all countries, many developing countries have been affected by shortcomings of laws and regulations. To effectively integrate environment and development in the policies and practices of each country, it is essential to develop and implement integrated, enforceable and effective laws and regulations that are based upon sound social, ecological, economic and scientific principles. It is equally critical to develop workable programmes to review and enforce compliance with the laws, regulations and standards that are adopted. Technical support may be needed for many countries to accomplish these goals. Technical cooperation requirements in this field include legal information, advisory services and specialized training and institutional capacity-building.

8.15. The enactment and enforcement of laws and regulations (at the regional, national, state/provincial or local/municipal level) are also essential for the implementation of most international agreements in the field of environment and development, as illustrated by the frequent treaty obligation to report on legislative measures. The survey of existing agreements undertaken in the context of conference preparations has indicated problems of compliance in this respect, and the need for improved national implementation and, where appropriate, related technical assistance. In developing their national priorities, countries should take account of their international obligations.

Objectives

8.16. The overall objective is to promote, in the light of country-specific conditions, the integration of environment and development policies through appropriate legal and regulatory policies, instruments and enforcement mechanisms at the national, state, provincial and local level. Recognizing that countries will develop their own priorities in accordance with their needs and national and, where appropriate, regional plans, policies and programmes, the following objectives are proposed:

(a) To disseminate information on effective legal and regulatory innovations in the field of environment and development, including appropriate instruments and compliance incentives, with a view to encouraging their wider use and adoption at the national, state, provincial and local level;

(b) To support countries that request it in their national efforts to modernize and strengthen the policy and legal framework of governance for sustainable development, having due regard for local social values and infrastructures;

(c) To encourage the development and implementation of national, state, provincial and local programmes that assess and promote compliance and respond appropriately to non-compliance.

Activities

(a) Making laws and regulations more effective

8.17. Governments, with the support, where appropriate, of competent international organizations, should regularly assess the laws and regulations enacted and the related institutional/administrative machinery established at the national/state and local/municipal level in the field of environment and sustainable development, with a view to rendering them effective in practice. Programmes for this purpose could include the promotion of public awareness, preparation and distribution of guidance material, and specialized training, including workshops, seminars, education programmes and conferences, for public officials who design, implement, monitor and enforce laws and regulations.

(b) Establishing judicial and administrative procedures

8.18. Governments and legislators, with the support, where appropriate, of competent international organizations, should establish judicial and administrative procedures for legal redress and remedy of actions affecting environment and development that may be unlawful or infringe on rights under the law, and should provide access to individuals, groups and organizations with a recognized legal interest.

(c) Providing legal reference and support services

8.19. Competent intergovernmental and non-governmental organizations could cooperate to provide Governments and legislators, upon request, with an integrated programme of environment and development law (sustainable development law) services, carefully adapted to the specific requirements of the recipient legal and administrative systems. Such systems could usefully include assistance in the preparation of comprehensive inventories and reviews of national legal systems. Past experience has demonstrated the usefulness of combining specialized legal information services with legal expert advice. Within the United Nations system, closer cooperation among all agencies concerned would avoid duplication of databases and facilitate division of

labour. These agencies could examine the possibility and merit of performing reviews of selected national legal systems.

(d) Establishing a cooperative training network for sustainable development law

8.20. Competent international and academic institutions could, within agreed frameworks, cooperate to provide, especially for trainees from developing countries, postgraduate programmes and in-service training facilities in environment and development law. Such training should address both the effective application and the progressive improvement of applicable laws, the related skills of negotiating, drafting and mediation, and the training of trainers. Intergovernmental and non-governmental organizations already active in this field could cooperate with related university programmes to harmonize curriculum planning and to offer an optimal range of options to interested Governments and potential sponsors.

(e) Developing effective national programmes for reviewing and enforcing compliance with national, state, provincial and local laws on environment and development

8.21. Each country should develop integrated strategies to maximize compliance with its laws and regulations relating to sustainable development, with assistance from international organizations and other countries as appropriate. The strategies could include:

(a) Enforceable, effective laws, regulations and standards that are based on sound economic, social and environmental principles and appropriate risk assessment, incorporating sanctions designed to punish violations, obtain redress and deter future violations;

(b) Mechanisms for promoting compliance;

(c) Institutional capacity for collecting compliance data, regularly reviewing compliance, detecting violations, establishing enforcement priorities, undertaking effective enforcement, and conducting periodic evaluations of the effectiveness of compliance and enforcement programmes;

(d) Mechanisms for appropriate involvement of individuals and groups in the development and enforcement of laws and regulations on environment and development.

(f) National monitoring of legal follow-up to international instruments

8.22. Contracting parties to international agreements, in consultation with the appropriate secretariats of relevant international conventions as appropriate, should improve practices and procedures for collecting information on legal and regulatory measures taken. Contracting parties to international agreements could undertake sample surveys of domestic follow-up action subject to agreement by the sovereign States concerned.

Means of implementation

(a) Financing and cost evaluation

8.23. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $6 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

8.24. The programme relies essentially on a continuation of ongoing work for legal data collection, translation and assessment. Closer cooperation between existing databases may be expected to lead to better division of labour (e.g., in geographical coverage of national legislative gazettes and other reference sources) and to improved standardization and compatibility of data, as appropriate.

(c) Human resource development

8.25. Participation in training is expected to benefit practitioners from developing countries and to enhance training opportunities for women. Demand for this type of postgraduate and in-service training is known to be high. The seminars, workshops and conferences on review and enforcement that have been held to date have been very successful and well attended. The purpose of these efforts is to develop resources (both human and institutional) to design and implement effective programmes to continuously review and enforce national and local laws, regulations and standards on sustainable development.

(d) Strengthening legal and institutional capacity

8.26. A major part of the programme should be oriented towards improving the legal-institutional capacities of countries to cope with national problems of governance and effective law-making and law-applying in the field of environment and sustainable development. Regional centres of excellence could be designated and supported to build up specialized databases and training facilities for linguistic/cultural groups of legal systems.

C. Making effective use of economic instruments and market and other incentives

Basis for action

8.27. Environmental law and regulation are important but cannot alone be expected to deal with the problems of environment and development. Prices, markets and governmental fiscal and economic policies also play a complementary role in shaping attitudes and behaviour towards the environment.

8.28. During the past several years, many Governments, primarily in industrialized countries but also in Central and Eastern Europe and in developing countries, have been making increasing use of economic approaches, including those that are market-oriented. Examples include the polluter-pays principle and the more recent natural-resource-user-pays concept.

8.29. Within a supportive international and national economic context and given the necessary legal and regulatory framework, economic and market-oriented approaches can in many cases enhance capacity to deal with the issues of environment and development. This would be achieved by providing cost-effective solutions, applying integrated pollution prevention control, promoting technological innovation and influencing environmental behaviour, as well as providing financial resources to meet sustainable development objectives.

8.30. What is needed is an appropriate effort to explore and make more effective and widespread use of economic and market-oriented approaches within a broad framework of development policies, law and regulation suited to country-specific conditions as part of a general transition to economic and environmental policies that are supportive and mutually reinforcing.

Objectives

8.31. Recognizing that countries will develop their own priorities in accordance with their needs and national plans, policies and programmes, the challenge is to achieve significant progress in the years ahead in meeting three fundamental objectives:

(a) To incorporate environmental costs in the decisions of producers and consumers, to reverse the tendency to treat the environment as a "free good" and to pass these costs on to other parts of society, other countries, or to future generations;

(b) To move more fully towards integration of social and environmental costs into economic activities, so that prices will appropriately reflect the relative scarcity and total value of resources and contribute towards the prevention of environmental degradation;

(c) To include, wherever appropriate, the use of market principles in the framing of economic instruments and policies to pursue sustainable development.

Activities

(a) Improving or reorienting governmental policies

8.32. In the near term, Governments should consider gradually building on experience with economic instruments and market mechanisms by undertaking to reorient their policies, keeping in mind national plans, priorities and objectives, in order to:

(a) Establish effective combinations of economic, regulatory and voluntary (self-regulatory) approaches;

(b) Remove or reduce those subsidies that do not conform with sustainable development objectives;

(c) Reform or recast existing structures of economic and fiscal incentives to meet environment and development objectives;

(d) Establish a policy framework that encourages the creation of new markets in pollution control and environmentally sounder resource management;

(e) Move towards pricing consistent with sustainable development objectives.

8.33. In particular, Governments should explore, in cooperation with business and industry, as appropriate, how effective use can be made of economic instruments and market mechanisms in the following areas:

(a) Issues related to energy, transportation, agriculture and forestry, water, wastes, health, tourism and tertiary services;

(b) Global and transboundary issues;

(c) The development and introduction of environmentally sound technology and its adaptation, diffusion and transfer to developing countries in conformity with chapter 34.

(b) Taking account of the particular circumstances of developing countries and countries with economies in transition

8.34. A special effort should be made to develop applications of the use of economic instruments and market mechanisms geared to the particular needs of developing countries and countries with economies in transition, with the assistance of regional and international economic and environmental organizations and, as appropriate, non-governmental research institutes, by:

(a) Providing technical support to those countries on issues relating to the application of economic instruments and market mechanisms;

(b) Encouraging regional seminars and, possibly, the development of regional centres of expertise.

(c) Creating an inventory of effective uses of economic instruments and market mechanisms

8.35. Given the recognition that the use of economic instruments and market mechanisms is relatively recent, exchange of information about different countries' experiences with such approaches should be actively encouraged. In this regard, Governments should encourage the use of existing means of information exchange to look at effective uses of economic instruments.

(d) Increasing understanding of the role of economic instruments and market mechanisms

8.36. Governments should encourage research and analysis on effective uses of economic instruments and incentives with the assistance and support of regional and international economic and environmental organizations, as well as non-governmental research institutes, with a focus on such key issues as:

(a) The role of environmental taxation suited to national conditions;

(b) The implications of economic instruments and incentives for competitiveness and international trade, and potential needs for appropriate future international cooperation and coordination;

(c) The possible social and distributive implications of using various instruments.

(e) Establishing a process for focusing on pricing

8.37. The theoretical advantages of using pricing policies, where appropriate, need to be better understood, and accompanied by greater understanding of what it means to take significant steps in this direction. Processes should therefore be initiated, in cooperation with business, industry, large enterprises, transnational corporations, as well as other social groups, as appropriate, at both the national and international levels, to examine:

(a) The practical implications of moving towards greater reliance on pricing that internalize environmental costs appropriate to help achieve sustainable development objectives;

(b) The implications for resource pricing in the case of resource-exporting countries, including the implications of such pricing policies for developing countries;

(c) The methodologies used in valuing environmental costs.

(f) Enhancing understanding of sustainable development economics

8.38. Increased interest in economic instruments, including market mechanisms, also requires a concerted effort to improve understanding of sustainable development economics by:

(a) Encouraging institutions of higher learning to review their curricula and strengthen studies in sustainable development economics;

(b) Encouraging regional and international economic organizations and non-governmental research institutes with expertise in this area to provide training sessions and seminars for government officials;

(c) Encouraging business and industry, including large industrial enterprises and transnational corporations with expertise in environmental matters, to organize training programmes for the private sector and other groups.

Means of implementation

8.39. This programme involves adjustments or reorientation of policies on the part of Governments. It also involves international and regional economic and environmental organizations and agencies with expertise in this area, including transnational corporations.

(a) Financing and cost evaluation

8.40. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $5 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

D. Establishing systems for integrated environmental and economic accounting

Basis for action

8.41. A first step towards the integration of sustainability into economic management is the establishment of better measurement of the crucial role of the environment as a source of natural capital and as a sink for by-products generated during the production of man-made capital and other human activities. As sustainable development encompasses social, economic and environmental dimensions, it is also important that national accounting procedures are not restricted to measuring the production of goods and services that are conventionally remunerated. A common framework needs to be developed whereby the contributions made by all sectors and activities of society, that are not included in the conventional national accounts, are included, to the extent consistent with sound theory and practicability, in satellite accounts. A programme to develop national systems of integrated environmental and economic accounting in all countries is proposed.

Objectives

8.42. The main objective is to expand existing systems of national economic accounts in order to integrate environment and social dimensions in the accounting framework, including at least satellite systems of accounts for natural resources in all member States. The resulting systems of integrated environmental and economic accounting (IEEA) to be established in all member States at the earliest date should be seen as a complement to, rather than a

substitute for, traditional national accounting practices for the foreseeable future. IEEAs would be designed to play an integral part in the national development decision-making process. National accounting agencies should work in close collaboration with national environmental statistics as well as the geographic and natural resource departments. The definition of economically active could be expanded to include people performing productive but unpaid tasks in all countries. This would enable their contribution to be adequately measured and taken into account in decision-making.

Activities

(a) Strengthening international cooperation

8.43. The Statistical Office of the United Nations Secretariat should:

(a) Make available to all member States the methodologies contained in the SNA Handbook on Integrated Environmental and Economic Accounting;

(b) In collaboration with other relevant United Nations organizations, further develop, test, refine and then standardize the provisional concepts and methods such as those proposed by the SNA Handbook, keeping member States informed of the status of the work throughout this process;

(c) Coordinate, in close cooperation with other international organizations, the training of national accountants, environmental statisticians and national technical staff in small groups for the establishment, adaptation and development of national IEEAs.

8.44. The Department of Economic and Social Development of the United Nations Secretariat, in close collaboration with other relevant United Nations organizations, should:

(a) Support, in all member States, the utilization of sustainable development indicators in national economic and social planning and decision-making practices, with a view to ensuring that IEEAs are usefully integrated in economic development planning at the national level;

(b) Promote improved environmental and economic and social data collection.

(b) Strengthening national accounting systems

8.45. At the national level, the programme could be adopted mainly by the agencies dealing with national accounts, in close cooperation with environmental statistics and natural resource departments, with a view to assisting national economic analysts and decision makers in charge of national economic planning. National institutions should play a crucial role not only as the depositary of the system but also in its adaptation, establishment and continuous use. Unpaid productive work such as domestic work and child care should be included, where appropriate, in satellite national accounts and

economic statistics. Time-use surveys could be a first step in the process of developing these satellite accounts.

(c) Establishing an assessment process

8.46. At the international level, the Statistical Commission should assemble and review experience and advise member States on technical and methodological issues related to the further development and implementation of IEEAs in member States.

8.47. Governments should seek to identify and consider measures to correct price distortions arising from environmental programmes affecting land, water, energy and other natural resources.

8.48. Governments should encourage corporations:

(a) To provide relevant environmental information through transparent reporting to shareholders, creditors, employees, governmental authorities, consumers and the public;

(b) To develop and implement methods and rules for accounting for sustaining development.

(d) Strengthening data and information collection

8.49. National Governments could consider implementing the necessary enhancement in data collection to set in place national IEEAs with a view to contributing pragmatically to sound economic management. Major efforts should be made to augment the capacity to collect and analyse environmental data and information and to integrate it with economic data, including gender disaggregated data. Efforts should also be made to develop physical environmental accounts. International donor agencies should consider financing the development of intersectoral data banks to help ensure that national planning for sustainable development is based on precise, reliable and effective information and is suited to national conditions.

(e) Strengthening technical cooperation

8.50. The Statistical Office of the United Nations Secretariat, in close collaboration with relevant United Nations organizations, should strengthen existing mechanisms for technical cooperation among countries. This should also include exchange of experience in the establishment of IEEAs, particularly in connection with the valuation of non-marketed natural resources and standardization in data collection. The cooperation of business and industry, including large industrial enterprises and transnational corporations with experience in valuation of such resources, should also be sought.

Means of implementation

(a) Financing and cost evaluation

8.51. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $2 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Strengthening institutions

8.52. To ensure the application of IEEAs:

(a) National institutions in developing countries could be strengthened to ensure the effective integration of environment and development at the planning and decision-making levels;

(b) The Statistical Office should provide the necessary technical support to member States, in close collaboration with the assessment process to be established by the Statistical Commission; the Statistical Office should provide appropriate support for establishing IEEAs, in collaboration with relevant United Nations agencies.

(c) Enhancing the use of information technology

8.53. Guidelines and mechanisms could be developed and agreed upon for the adaptation and diffusion of information technologies to developing countries. State-of-the-art data management technologies should be adopted for the most efficient and widespread use of IEEAs.

(d) Strengthening national capacity

8.54. Governments, with the support of the international community, should strengthen national institutional capacity to collect, store, organize, assess and use data in decision-making. Training in all areas related to the establishment of IEEAs, and at all levels, will be required, especially in developing countries. This should include technical training of those involved in economic and environmental analysis, data collection and national accounting, as well as training decision makers to use such information in a pragmatic and appropriate way.

SECTION II. CONSERVATION AND MANAGEMENT OF RESOURCES FOR DEVELOPMENT

Chapter 9

PROTECTION OF THE ATMOSPHERE

INTRODUCTION

9.1. Protection of the atmosphere is a broad and multidimensional endeavour involving various sectors of economic activity. The options and measures described in the present chapter are recommended for consideration and, as appropriate, implementation by Governments and other bodies in their efforts to protect the atmosphere.

9.2. It is recognized that many of the issues discussed in this chapter are also addressed in such international agreements as the 1985 Vienna Convention for the Protection of the Ozone Layer, the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer as amended, the 1992 United Nations Framework Convention on Climate Change and other international, including regional, instruments. In the case of activities covered by such agreements, it is understood that the recommendations contained in this chapter do not oblige any Government to take measures which exceed the provisions of these legal instruments. However, within the framework of this chapter, Governments are free to carry out additional measures which are consistent with those legal instruments.

9.3. It is also recognized that activities that may be undertaken in pursuit of the objectives of this chapter should be coordinated with social and economic development in an integrated manner with a view to avoiding adverse impacts on the latter, taking into full account the legitimate priority needs of developing countries for the achievement of sustained economic growth and the eradication of poverty.

9.4. In this context particular reference is also made to programme area A of chapter 2 of Agenda 21 (Promoting sustainable development through trade).

9.5. The present chapter includes the following four programme areas:

(a) Addressing the uncertainties: improving the scientific basis for decision-making;

(b) Promoting sustainable development:

(i) Energy development, efficiency and consumption;

(ii) Transportation;

(iii) Industrial development;

(iv) Terrestrial and marine resource development and land use;

(c) Preventing stratospheric ozone depletion;

(d) Transboundary atmospheric pollution.

PROGRAMME AREAS

A. Addressing the uncertainties: improving the scientific basis for decision-making

Basis for action

9.6. Concern about climate change and climate variability, air pollution and ozone depletion has created new demands for scientific, economic and social information to reduce the remaining uncertainties in these fields. Better understanding and prediction of the various properties of the atmosphere and of the affected ecosystems, as well as health impacts and their interactions with socio-economic factors, are needed.

Objectives

9.7. The basic objective of this programme area is to improve the understanding of processes that influence and are influenced by the Earth's atmosphere on a global, regional and local scale, including, inter alia, physical, chemical, geological, biological, oceanic, hydrological, economic and social processes; to build capacity and enhance international cooperation; and to improve understanding of the economic and social consequences of atmospheric changes and of mitigation and response measures addressing such changes.

Activities

9.8. Governments at the appropriate level, with the cooperation of the relevant United Nations bodies and, as appropriate, intergovernmental and non-governmental organizations, and the private sector, should:

(a) Promote research related to the natural processes affecting and being affected by the atmosphere, as well as the critical linkages between sustainable development and atmospheric changes, including impacts on human health, ecosystems, economic sectors and society;

(b) Ensure a more balanced geographical coverage of the Global Climate Observing System and its components, including the Global Atmosphere Watch, by facilitating, inter alia, the establishment and operation of additional systematic observation stations, and by contributing to the development, utilization and accessibility of these databases;

(c) Promote cooperation in:

(i) The development of early detection systems concerning changes and fluctuations in the atmosphere;

(ii) The establishment and improvement of capabilities to predict such changes and fluctuations and to assess the resulting environmental and socio-economic impacts;

(d) Cooperate in research to develop methodologies and identify threshold levels of atmospheric pollutants, as well as atmospheric levels of greenhouse gas concentrations, that would cause dangerous anthropogenic interference with the climate system and the environment as a whole, and the associated rates of change that would not allow ecosystems to adapt naturally;

(e) Promote, and cooperate in the building of scientific capacities, the exchange of scientific data and information, and the facilitation of the participation and training of experts and technical staff, particularly of developing countries, in the fields of research, data assembly, collection and assessment, and systematic observation related to the atmosphere.

B. Promoting sustainable development

1. Energy development, efficiency and consumption

Basis for action

9.9. Energy is essential to economic and social development and improved quality of life. Much of the world's energy, however, is currently produced and consumed in ways that could not be sustained if technology were to remain constant and if overall quantities were to increase substantially. The need to control atmospheric emissions of greenhouse and other gases and substances will increasingly need to be based on efficiency in energy production, transmission, distribution and consumption, and on growing reliance on environmentally sound energy systems, particularly new and renewable sources of energy. 1/ All energy sources will need to be used in ways that respect the atmosphere, human health and the environment as a whole.

9.10. The existing constraints to increasing the environmentally sound energy supplies required for pursuing the path towards sustainable development, particularly in developing countries, need to be removed.

Objectives

9.11. The basic and ultimate objective of this programme area is to reduce adverse effects on the atmosphere from the energy sector by promoting policies or programmes, as appropriate, to increase the contribution of environmentally sound and cost-effective energy systems, particularly new and renewable ones, through less polluting and more efficient energy production, transmission, distribution and use. This objective should reflect the need for equity, adequate energy supplies and increasing energy consumption in developing

countries, and should take into consideration the situations of countries that are highly dependent on income generated from the production, processing and export, and/or consumption of fossil fuels and associated energy-intensive products and/or the use of fossil fuels for which countries have serious difficulties in switching to alternatives, and the situations of countries highly vulnerable to adverse effects of climate change.

Activities

9.12. Governments at the appropriate level, with the cooperation of the relevant United Nations bodies and, as appropriate, intergovernmental and non-governmental organizations, and the private sector, should:

(a) Cooperate in identifying and developing economically viable, environmentally sound energy sources to promote the availability of increased energy supplies to support sustainable development efforts, in particular in developing countries;

(b) Promote the development at the national level of appropriate methodologies for making integrated energy, environment and economic policy decisions for sustainable development, inter alia, through environmental impact assessments;

(c) Promote the research, development, transfer and use of improved energy-efficient technologies and practices, including endogenous technologies in all relevant sectors, giving special attention to the rehabilitation and modernization of power systems, with particular attention to developing countries;

(d) Promote the research, development, transfer and use of technologies and practices for environmentally sound energy systems, including new and renewable energy systems, with particular attention to developing countries;

(e) Promote the development of institutional, scientific, planning and management capacities, particularly in developing countries, to develop, produce and use increasingly efficient and less polluting forms of energy;

(f) Review current energy supply mixes to determine how the contribution of environmentally sound energy systems as a whole, particularly new and renewable energy systems, could be increased in an economically efficient manner, taking into account respective countries' unique social, physical, economic and political characteristics, and examining and implementing, where appropriate, measures to overcome any barriers to their development and use;

(g) Coordinate energy plans regionally and subregionally, where applicable, and study the feasibility of efficient distribution of environmentally sound energy from new and renewable energy sources;

(h) In accordance with national socio-economic development and environment priorities, evaluate and, as appropriate, promote cost-effective policies or programmes, including administrative, social and economic measures, in order to improve energy efficiency;

(i) Build capacity for energy planning and programme management in energy efficiency, as well as for the development, introduction, and promotion of new and renewable sources of energy;

(j) Promote appropriate energy efficiency and emission standards or recommendations at the national level, 2/ aimed at the development and use of technologies that minimize adverse impacts on the environment;

(k) Encourage education and awareness-raising programmes at the local, national, subregional and regional levels concerning energy efficiency and environmentally sound energy systems;

(l) Establish or enhance, as appropriate, in cooperation with the private sector, labelling programmes for products to provide decision makers and consumers with information on opportunities for energy efficiency.

2. Transportation

Basis for action

9.13. The transport sector has an essential and positive role to play in economic and social development, and transportation needs will undoubtedly increase. However, since the transport sector is also a source of atmospheric emissions, there is need for a review of existing transport systems and for more effective design and management of traffic and transport systems.

Objectives

9.14. The basic objective of this programme area is to develop and promote cost-effective policies or programmes, as appropriate, to limit, reduce or control, as appropriate, harmful emissions into the atmosphere and other adverse environmental effects of the transport sector, taking into account development priorities as well as the specific local and national circumstances and safety aspects.

Activities

9.15. Governments at the appropriate level, with the cooperation of the relevant United Nations bodies and, as appropriate, intergovernmental and non-governmental organizations, and the private sector, should:

(a) Develop and promote, as appropriate, cost-effective, more efficient, less polluting and safer transport systems, particularly integrated rural and urban mass transit, as well as environmentally sound road networks, taking

into account the needs for sustainable social, economic and development priorities, particularly in developing countries;

(b) Facilitate at the international, regional, subregional and national levels access to and the transfer of safe, efficient, including resource-efficient, and less polluting transport technologies, particularly to the developing countries, including the implementation of appropriate training programmes;

(c) Strengthen, as appropriate, their efforts at collecting, analysing and exchanging relevant information on the relation between environment and transport, with particular emphasis on the systematic observation of emissions and the development of a transport database;

(d) In accordance with national socio-economic development and environment priorities, evaluate and, as appropriate, promote cost-effective policies or programmes, including administrative, social and economic measures, in order to encourage use of transportation modes that minimize adverse impacts on the atmosphere;

(e) Develop or enhance, as appropriate, mechanisms to integrate transport planning strategies and urban and regional settlement planning strategies, with a view to reducing the environmental impacts of transport;

(f) Study, within the framework of the United Nations and its regional commissions, the feasibility of convening regional conferences on transport and the environment.

3. Industrial development

Basis for action

9.16. Industry is essential for the production of goods and services and is a major source of employment and income, and industrial development as such is essential for economic growth. At the same time, industry is a major resource and materials user and consequently industrial activities result in emissions into the atmosphere and the environment as a whole. Protection of the atmosphere can be enhanced, inter alia, by increasing resource and materials efficiency in industry, installing or improving pollution abatement technologies and replacing chlorofluorocarbons (CFCs) and other ozone-depleting substances with appropriate substitutes, as well as by reducing wastes and by-products.

Objectives

9.17. The basic objective of this programme area is to encourage industrial development in ways that minimize adverse impacts on the atmosphere by, inter alia, increasing efficiency in the production and consumption by industry of all resources and materials, by improving pollution-abatement technologies and by developing new environmentally sound technologies.

Activities

9.18. Governments at the appropriate level, with the cooperation of the relevant United Nations bodies and, as appropriate, intergovernmental and non-governmental organizations, and the private sector, should:

(a) In accordance with national socio-economic development and environment priorities, evaluate and, as appropriate, promote cost-effective policies or programmes, including administrative, social and economic measures, in order to minimize industrial pollution and adverse impacts on the atmosphere;

(b) Encourage industry to increase and strengthen its capacity to develop technologies, products and processes that are safe, less polluting and make more efficient use of all resources and materials, including energy;

(c) Cooperate in the development and transfer of such industrial technologies and in the development of capacities to manage and use such technologies, particularly with respect to developing countries;

(d) Develop, improve and apply environmental impact assessments to foster sustainable industrial development;

(e) Promote efficient use of materials and resources, taking into account the life cycles of products, in order to realize the economic and environmental benefits of using resources more efficiently and producing fewer wastes;

(f) Support the promotion of less polluting and more efficient technologies and processes in industries, taking into account area-specific accessible potentials for energy, particularly safe and renewable sources of energy, with a view to limiting industrial pollution, and adverse impacts on the atmosphere.

4. Terrestrial and marine resource development and land use

Basis for action

9.19. Land-use and resource policies will both affect and be affected by changes in the atmosphere. Certain practices related to terrestrial and marine resources and land use can decrease greenhouse gas sinks and increase atmospheric emissions. The loss of biological diversity may reduce the resilience of ecosystems to climatic variations and air pollution damage. Atmospheric changes can have important impacts on forests, biodiversity, and freshwater and marine ecosystems, as well as on economic activities, such as agriculture. Policy objectives in different sectors may often diverge and will need to be handled in an integrated manner.

Objectives

9.20. The objectives of this programme area are:

(a) To promote terrestrial and marine resource utilization and appropriate land-use practices that contribute to:

(i) The reduction of atmospheric pollution and/or the limitation of anthropogenic emissions of greenhouse gases;

(ii) The conservation, sustainable management and enhancement, where appropriate, of all sinks for greenhouse gases;

(iii) The conservation and sustainable use of natural and environmental resources;

(b) To ensure that actual and potential atmospheric changes and their socio-economic and ecological impacts are fully taken into account in planning and implementing policies and programmes concerning terrestrial and marine resources utilization and land-use practices.

Activities

9.21. Governments at the appropriate level, with the cooperation of the relevant United Nations bodies and, as appropriate, intergovernmental and non-governmental organizations, and the private sector, should:

(a) In accordance with national socio-economic development and environment priorities, evaluate and, as appropriate, promote cost-effective policies or programmes, including administrative, social and economic measures, in order to encourage environmentally sound land-use practices;

(b) Implement policies and programmes that will discourage inappropriate and polluting land-use practices and promote sustainable utilization of terrestrial and marine resources;

(c) Consider promoting the development and use of terrestrial and marine resources and land-use practices that will be more resilient to atmospheric changes and fluctuations;

(d) Promote sustainable management and cooperation in the conservation and enhancement, as appropriate, of sinks and reservoirs of greenhouse gases, including biomass, forests and oceans, as well as other terrestrial, coastal and marine ecosystems.

C. Preventing stratospheric ozone depletion

Basis for action

9.22. Analysis of recent scientific data has confirmed the growing concern about the continuing depletion of the Earth's stratospheric ozone layer by reactive chlorine and bromine from man-made CFCs, halons and related substances. While the 1985 Vienna Convention for the Protection of the Ozone Layer and the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer (as amended in London in 1990) were important steps in international action, the total chlorine loading of the atmosphere of ozone-depleting substances has continued to rise. This can be changed through compliance with the control measures identified within the Protocol.

Objectives

9.23. The objectives of this programme area are:

(a) To realize the objectives defined in the Vienna Convention and the Montreal Protocol and its 1990 amendments, including the consideration in those instruments of the special needs and conditions of the developing countries and the availability to them of alternatives to substances that deplete the ozone layer. Technologies and natural products that reduce demand for these substances should be encouraged;

(b) To develop strategies aimed at mitigating the adverse effects of ultraviolet radiation reaching the Earth's surface as a consequence of depletion and modification of the stratospheric ozone layer.

Activities

9.24. Governments at the appropriate level, with the cooperation of the relevant United Nations bodies and, as appropriate, intergovernmental and non-governmental organizations, and the private sector, should:

(a) Ratify, accept or approve the Montreal Protocol and its 1990 amendments; pay their contributions towards the Vienna/Montreal trust funds and the interim multilateral ozone fund promptly; and contribute, as appropriate, towards ongoing efforts under the Montreal Protocol and its implementing mechanisms, including making available substitutes for CFCs and other ozone-depleting substances and facilitating the transfer of the corresponding technologies to developing countries in order to enable them to comply with the obligations of the Protocol;

(b) Support further expansion of the Global Ozone Observing System by facilitating - through bilateral and multilateral funding - the establishment and operation of additional systematic observation stations, especially in the tropical belt in the southern hemisphere;

(c) Participate actively in the continuous assessment of scientific information and the health and environmental effects, as well as of the technological/economic implications of stratospheric ozone depletion; and consider further actions that prove warranted and feasible on the basis of these assessments;

(d) Based on the results of research on the effects of the additional ultraviolet radiation reaching the Earth's surface, consider taking appropriate remedial measures in the fields of human health, agriculture and marine environment;

(e) Replace CFCs and other ozone-depleting substances, consistent with the Montreal Protocol, recognizing that a replacement's suitability should be evaluated holistically and not simply based on its contribution to solving one atmospheric or environmental problem.

D. Transboundary atmospheric pollution

Basis for action

9.25. Transboundary air pollution has adverse health impacts on humans and other detrimental environmental impacts, such as tree and forest loss and the acidification of water bodies. The geographical distribution of atmospheric pollution monitoring networks is uneven, with the developing countries severely underrepresented. The lack of reliable emissions data outside Europe and North America is a major constraint to measuring transboundary air pollution. There is also insufficient information on the environmental and health effects of air pollution in other regions.

9.26. The 1979 Convention on Long-range Transboundary Air Pollution, and its protocols, have established a regional regime in Europe and North America, based on a review process and cooperative programmes for systematic observation of air pollution, assessment and information exchange. These programmes need to be continued and enhanced, and their experience needs to be shared with other regions of the world.

Objectives

9.27. The objectives of this programme area are:

(a) To develop and apply pollution control and measurement technologies for stationary and mobile sources of air pollution and to develop alternative environmentally sound technologies;

(b) To observe and assess systematically the sources and extent of transboundary air pollution resulting from natural processes and anthropogenic activities;

(c) To strengthen the capabilities, particularly of developing countries, to measure, model and assess the fate and impacts of transboundary air pollution, through, inter alia, exchange of information and training of experts;

(d) To develop capabilities to assess and mitigate transboundary air pollution resulting from industrial and nuclear accidents, natural disasters and the deliberate and/or accidental destruction of natural resources;

(e) To encourage the establishment of new and the implementation of existing regional agreements for limiting transboundary air pollution;

(f) To develop strategies aiming at the reduction of emissions causing transboundary air pollution and their effects.

Activities

9.28. Governments at the appropriate level, with the cooperation of the relevant United Nations bodies and, as appropriate, intergovernmental and non-governmental organizations, the private sector and financial institutions, should:

(a) Establish and/or strengthen regional agreements for transboundary air pollution control and cooperate, particularly with developing countries, in the areas of systematic observation and assessment, modelling and the development and exchange of emission control technologies for mobile and stationary sources of air pollution. In this context, greater emphasis should be put on addressing the extent, causes, health and socio-economic impacts of ultraviolet radiation, acidification of the environment and photo-oxidant damage to forests and other vegetation;

(b) Establish or strengthen early warning systems and response mechanisms for transboundary air pollution resulting from industrial accidents and natural disasters and the deliberate and/or accidental destruction of natural resources;

(c) Facilitate training opportunities and exchange of data, information and national and/or regional experiences;

(d) Cooperate on regional, multilateral and bilateral bases to assess transboundary air pollution, and elaborate and implement programmes identifying specific actions to reduce atmospheric emissions and to address their environmental, economic, social and other effects.

Means of implementation

International and regional cooperation

9.29. Existing legal instruments have created institutional structures which relate to the purposes of these instruments, and relevant work should primarily continue in those contexts. Governments should continue to

cooperate and enhance their cooperation at the regional and global levels, including cooperation within the United Nations system. In this context reference is made to the recommendations in chapter 38 of Agenda 21 (International institutional arrangements).

Capacity-building

9.30. Countries, in cooperation with the relevant United Nations bodies, international donors and non-governmental organizations, should mobilize technical and financial resources and facilitate technical cooperation with developing countries to reinforce their technical, managerial, planning and administrative capacities to promote sustainable development and the protection of the atmosphere, in all relevant sectors.

Human resource development

9.31. Education and awareness-raising programmes concerning the promotion of sustainable development and the protection of the atmosphere need to be introduced and strengthened at the local, national and international levels in all relevant sectors.

Financial and cost evaluation

9.32. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities under programme area A to be about $640 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

9.33. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of the four-part programme under programme area B to be about $20 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

9.34. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities under programme area C to be in the range of $160-590 million on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

9.35. The Conference secretariat has included costing for technical assistance and pilot programmes under paragraphs 9.32 and 9.33.

Notes

1/ New and renewable energy sources are solar thermal, solar photovoltaic, wind, hydro, biomass, geothermal, ocean, animal and human power, as referred to in the reports of the Committee on the Development and Utilization of New and Renewable Sources of Energy, prepared specifically for the Conference (see A/CONF.151/PC/119 and A/AC.218/1992/5).

2/ This includes standards or recommendations promoted by regional economic integration organizations.

Chapter 10

INTEGRATED APPROACH TO THE PLANNING AND MANAGEMENT OF LAND RESOURCES

INTRODUCTION

10.1. Land is normally defined as a physical entity in terms of its topography and spatial nature; a broader integrative view also includes natural resources: the soils, minerals, water and biota that the land comprises. These components are organized in ecosystems which provide a variety of services essential to the maintenance of the integrity of life-support systems and the productive capacity of the environment. Land resources are used in ways that take advantage of all these characteristics. Land is a finite resource, while the natural resources it supports can vary over time and according to management conditions and uses. Expanding human requirements and economic activities are placing ever increasing pressures on land resources, creating competition and conflicts and resulting in suboptimal use of both land and land resources. If, in the future, human requirements are to be met in a sustainable manner, it is now essential to resolve these conflicts and move towards more effective and efficient use of land and its natural resources. Integrated physical and land-use planning and management is an eminently practical way to achieve this. By examining all uses of land in an integrated manner, it makes it possible to minimize conflicts, to make the most efficient trade-offs and to link social and economic development with environmental protection and enhancement, thus helping to achieve the objectives of sustainable development. The essence of the integrated approach finds expression in the coordination of the sectoral planning and management activities concerned with the various aspects of land use and land resources.

10.2. The present chapter consists of one programme area, the integrated approach to the planning and management of land resources, which deals with the reorganization and, where necessary, some strengthening of the decision-making structure, including existing policies, planning and management procedures and methods that can assist in putting in place an integrated approach to land resources. It does not deal with the operational aspects of planning and management, which are more appropriately dealt with under the relevant sectoral programmes. Since the programme deals with an important cross-sectoral aspect of decision-making for sustainable development, it is closely related to a number of other programmes that deal with that issue directly.

Integrated approach to the planning and management of land resources

Basis for action

10.3. Land resources are used for a variety of purposes which interact and may compete with one another; therefore, it is desirable to plan and manage all uses in an integrated manner. Integration should take place at two levels, considering, on the one hand, all environmental, social and economic factors (including, for example, impacts of the various economic and social sectors on the environment and natural resources) and, on the other, all environmental and resource components together (i.e., air, water, biota, land, geological and natural resources). Integrated consideration facilitates appropriate choices and trade-offs, thus maximizing sustainable productivity and use. Opportunities to allocate land to different uses arise in the course of major settlement or development projects or in a sequential fashion as lands become available on the market. This in turn provides opportunities to support traditional patterns of sustainable land management or to assign protected status for conservation of biological diversity or critical ecological services.

10.4. A number of techniques, frameworks and processes can be combined to facilitate an integrated approach. They are the indispensable support for the planning and management process, at the national and local level, ecosystem or area levels and for the development of specific plans of action. Many of its elements are already in place but need to be more widely applied, further developed and strengthened. This programme area is concerned primarily with providing a framework that will coordinate decision-making; the content and operational functions are therefore not included here but are dealt with in the relevant sectoral programmes of Agenda 21.

Objectives

10.5. The broad objective is to facilitate allocation of land to the uses that provide the greatest sustainable benefits and to promote the transition to a sustainable and integrated management of land resources. In doing so, environmental, social and economic issues should be taken into consideration. Protected areas, private property rights, the rights of indigenous people and their communities and other local communities and the economic role of women in agriculture and rural development, among other issues, should be taken into account. In more specific terms, the objectives are as follows:

(a) To review and develop policies to support the best possible use of land and the sustainable management of land resources, by not later than 1996;

(b) To improve and strengthen planning, management and evaluation systems for land and land resources, by not later than 2000;

(c) To strengthen institutions and coordinating mechanisms for land and land resources, by not later than 1998;

(d) To create mechanisms to facilitate the active involvement and participation of all concerned, particularly communities and people at the local level, in decision-making on land use and management, by not later than 1996.

Activities

(a) Management-related activities

Developing supportive policies and policy instruments

10.6. Governments at the appropriate level, with the support of regional and international organizations, should ensure that policies and policy instruments support the best possible land use and sustainable management of land resources. Particular attention should be given to the role of agricultural land. To do this, they should:

(a) Develop integrated goal-setting and policy formulation at the national, regional and local levels that takes into account environmental, social, demographic and economic issues;

(b) Develop policies that encourage sustainable land use and management of land resources and take the land resource base, demographic issues and the interests of the local population into account;

(c) Review the regulatory framework, including laws, regulations and enforcement procedures, in order to identify improvements needed to support sustainable land use and management of land resources and restricts the transfer of productive arable land to other uses;

(d) Apply economic instruments and develop institutional mechanisms and incentives to encourage the best possible land use and sustainable management of land resources;

(e) Encourage the principle of delegating policy-making to the lowest level of public authority consistent with effective action and a locally driven approach.

Strengthening planning and management systems

10.7. Governments at the appropriate level, with the support of regional and international organizations, should review and, if appropiate, revise planning and management systems to facilitate an integrated approach. To do this, they should:

(a) Adopt planning and management systems that facilitate the integration of environmental components such as air, water, land and other

natural resources, using landscape ecological planning (LANDEP) or other approaches that focus on, for example, an ecosystem or a watershed;

(b) Adopt strategic frameworks that allow the integration of both developmental and environmental goals; examples of these frameworks include sustainable livelihood systems, rural development, the World Conservation Strategy/Caring for the Earth, primary environmental care (PEC) and others;

(c) Establish a general framework for land-use and physical planning within which specialized and more detailed sectoral plans (e.g., for protected areas, agriculture, forests, human settlements, rural development) can be developed; establish intersectoral consultative bodies to streamline project planning and implementation;

(d) Strengthen management systems for land and natural resources by including appropriate traditional and indigenous methods; examples of these practices include pastoralism, Hema reserves (traditional Islamic land reserves) and terraced agriculture;

(e) Examine and, if necessary, establish innovative and flexible approaches to programme funding;

(f) Compile detailed land capability inventories to guide sustainable land resources allocation, management and use at the national and local levels.

Promoting application of appropriate tools for planning and management

10.8. Governments at the appropriate level, with the support of national and international organizations, should promote the improvement, further development and widespread application of planning and management tools that facilitate an integrated and sustainable approach to land and resources. To do this, they should:

(a) Adopt improved systems for the interpretation and integrated analysis of data on land use and land resources;

(b) Systematically apply techniques and procedures for assessing the environmental, social and economic impacts, risks, costs and benefits of specific actions;

(c) Analyse and test methods to include land and ecosystem functions and land resources values in national accounts.

Raising awareness

10.9. Governments at the appropriate level, in collaboration with national institutions and interest groups and with the support of regional and international organizations, should launch awareness-raising campaigns to alert and educate people on the importance of integrated land and land resources management and the role that individuals and social groups can play

in it. This should be accompanied by provision of the means to adopt improved practices for land use and sustainable management.

Promoting public participation

10.10. Governments at the appropriate level, in collaboration with national organizations and with the support of regional and international organizations, should establish innovative procedures, programmes, projects and services that facilitate and encourage the active participation of those affected in the decision-making and implementation process, especially of groups that have, hitherto, often been excluded, such as women, youth, indigenous people and their communities and other local communities.

(b) Data and information

Strengthening information systems

10.11. Governments at the appropriate level, in collaboration with national institutions and the private sector and with the support of regional and international organizations, should strengthen the information systems necessary for making decisions and evaluating future changes on land use and management. The needs of both men and women should be taken into account. To do this, they should:

(a) Strengthen information, systematic observation and assessment systems for environmental, economic and social data related to land resources at the global, regional, national and local levels and for land capability and land-use and management patterns;

(b) Strengthen coordination between existing sectoral data systems on land and land resources and strengthen national capacity to gather and assess data;

(c) Provide the appropriate technical information necessary for informed decision-making on land use and management in an accessible form to all sectors of the population, especially to local communities and women;

(d) Support low-cost, community-managed systems for the collection of comparable information on the status and processes of change of land resources, including soils, forest cover, wildlife, climate and other elements.

(c) International and regional coordination and cooperation

Establishing regional machinery

10.12. Governments at the appropriate level, with the support of regional and international organizations, should strengthen regional cooperation and exchange of information on land resources. To do this, they should:

(a) Study and design regional policies to support programmes for land-use and physical planning;

(b) Promote the development of land-use and physical plans in the countries of the region;

(c) Design information systems and promote training;

(d) Exchange, through networks and other appropriate means, information on experiences with the process and results of integrated and participatory planning and management of land resources at the national and local levels.

Means of implementation

(a) Financing and cost evaluation

10.13. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $50 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

Enhancing scientific understanding of the land resources system

10.14. Governments at the appropriate level, in collaboration with the national and international scientific community and with the support of appropriate national and international organizations, should promote and support research, tailored to local environments, on the land resources system and the implications for sustainable development and management practices. Priority should be given, as appropriate, to:

(a) Assessment of land potential capability and ecosystem functions;

(b) Ecosystemic interactions and interactions between land resources and social, economic and environmental systems;

(c) Developing indicators of sustainability for land resources, taking into account environmental, economic, social, demographic, cultural and political factors.

Testing research findings through pilot projects

10.15. Governments at the appropriate level, in collaboration with the national and international scientific community and with the support of the relevant international organizations, should research and test, through pilot projects, the applicability of improved approaches to the integrated planning

and management of land resources, including technical, social and institutional factors.

(c) Human resource development

Enhancing education and training

10.16. Governments at the appropriate level, in collaboration with the appropriate local authorities, non-governmental organizations and international institutions, should promote the development of the human resources that are required to plan and manage land and land resources sustainably. This should be done by providing incentives for local initiatives and by enhancing local management capacity, particularly of women, through:

(a) Emphasizing interdisciplinary and integrative approaches in the curricula of schools and technical, vocational and university training;

(b) Training all relevant sectors concerned to deal with land resources in an integrated and sustainable manner;

(c) Training communities, relevant extension services, community-based groups and non-governmental organizations on land management techniques and approaches applied successfully elsewhere.

(d) Capacity-building

Strengthening technological capacity

10.17. Governments at the appropriate level, in cooperation with other Governments and with the support of relevant international organizations, should promote focused and concerted efforts for education and training and the transfer of techniques and technologies that support the various aspects of the sustainable planning and management process at the national, state/provincial and local levels.

Strengthening institutions

10.18. Governments at the appropriate level, with the support of appropriate international organizations, should:

(a) Review and, where appropriate, revise the mandates of institutions that deal with land and natural resources to include explicitly the interdisciplinary integration of environmental, social and economic issues;

(b) Strengthen coordinating mechanisms between institutions that deal with land-use and resources management to facilitate integration of sectoral concerns and strategies;

(c) Strengthen local decision-making capacity and improve coordination with higher levels.

Chapter 11

COMBATING DEFORESTATION

PROGRAMME AREAS

A. Sustaining the multiple roles and functions of all types of forests, forest lands and woodlands

Basis for action

11.1. There are major weaknesses in the policies, methods and mechanisms adopted to support and develop the multiple ecological, economic, social and cultural roles of trees, forests and forest lands. Many developed countries are confronted with the effects of air pollution and fire damage on their forests. More effective measures and approaches are often required at the national level to improve and harmonize policy formulation, planning and programming; legislative measures and instruments; development patterns; participation of the general public, especially women and indigenous people; involvement of youth; roles of the private sector, local organizations, non-governmental organizations and cooperatives; development of technical and multidisciplinary skills and quality of human resources; forestry extension and public education; research capability and support; administrative structures and mechanisms, including intersectoral coordination, decentralization and responsibility and incentive systems; and dissemination of information and public relations. This is especially important to ensure a rational and holistic approach to the sustainable and environmentally sound development of forests. The need for securing the multiple roles of forests and forest lands through adequate and appropriate institutional strengthening has been repeatedly emphasized in many of the reports, decisions and recommendations of FAO, ITTO, UNEP, the World Bank, IUCN and other organizations.

Objectives

11.2. The objectives of this programme area are as follows:

(a) To strengthen forest-related national institutions, to enhance the scope and effectiveness of activities related to the management, conservation and sustainable development of forests, and to effectively ensure the sustainable utilization and production of forests' goods and services in both the developed and the developing countries; by the year 2000, to strengthen the capacities and capabilities of national institutions to enable them to acquire the necessary knowledge for the protection and conservation of forests, as well as to expand their scope and, correspondingly, enhance the effectiveness of programmes and activities related to the management and development of forests;

(b) To strengthen and improve human, technical and professional skills, as well as expertise and capabilities to effectively formulate and implement policies, plans, programmes, research and projects on management, conservation and sustainable development of all types of forests and forest-based resources, and forest lands inclusive, as well as other areas from which forest benefits can be derived.

Activities

(a) Management-related activities

11.3. Governments at the appropriate level, with the support of regional, subregional and international organizations, should, where necessary, enhance institutional capability to promote the multiple roles and functions of all types of forests and vegetation inclusive of other related lands and forest-based resources in supporting sustainable development and environmental conservation in all sectors. This should be done, wherever possible and necessary, by strengthening and/or modifying the existing structures and arrangements, and by improving cooperation and coordination of their respective roles. Some of the major activities in this regard are as follows:

(a) Rationalizing and strengthening administrative structures and mechanisms, including provision of adequate levels of staff and allocation of responsibilities, decentralization of decision-making, provision of infrastructural facilities and equipment, intersectoral coordination and an effective system of communication;

(b) Promoting participation of the private sector, labour unions, rural cooperatives, local communities, indigenous people, youth, women, user groups and non-governmental organizations in forest-related activities, and access to information and training programmes within the national context;

(c) Reviewing and, if necessary, revising measures and programmes relevant to all types of forests and vegetation, inclusive of other related lands and forest-based resources, and relating them to other land uses and development policies and legislation; promoting adequate legislation and other measures as a basis against uncontrolled conversion to other types of land uses;

(d) Developing and implementing plans and programmes, including definition of national and, if necessary, regional and subregional goals, programmes and criteria for their implementation and subsequent improvement;

(e) Establishing, developing and sustaining an effective system of forest extension and public education to ensure better awareness, appreciation and management of forests with regard to the multiple roles and values of trees, forests and forest lands;

(f) Establishing and/or strengthening institutions for forest education and training, as well as forestry industries, for developing an adequate cadre of trained and skilled staff at the professional, technical and vocational levels, with emphasis on youth and women;

(g) Establishing and strengthening capabilities for research related to the different aspects of forests and forest products, for example, on the sustainable management of forests, research on biodiversity, on the effects of air-borne pollutants, on traditional uses of forest resources by local populations and indigenous people, and on improving market returns and other non-market values from the management of forests.

(b) Data and information

11.4. Governments at the appropriate level, with the assistance and cooperation of international, regional, subregional and bilateral agencies, where relevant, should develop adequate databases and baseline information necessary for planning and programme evaluation. Some of the more specific activities include the following:

(a) Collecting, compiling and regularly updating and distributing information on land classification and land use, including data on forest cover, areas suitable for afforestation, endangered species, ecological values, traditional/indigenous land use values, biomass and productivity, correlating demographic, socio-economic and forest resources information at the micro- and macro-levels, and undertaking periodic analyses of forest programmes;

(b) Establishing linkages with other data systems and sources relevant to supporting forest management, conservation and development, while further developing or reinforcing existing systems such as geographic information systems, as appropriate;

(c) Creating mechanisms to ensure public access to this information.

(c) International and regional cooperation and coordination

11.5. Governments at the appropriate level and institutions should cooperate in the provision of expertise and other support and the promotion of international research efforts, in particular with a view to enhancing transfer of technology and specialized training and ensuring access to experiences and research results. There is need for strengthening coordination and improving the performance of existing forest-related international organizations in providing technical cooperation and support to interested countries for the management, conservation and sustainable development of forests.

Means of implementation

(a) Financial and cost evaluation

11.6. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $2.5 billion, including about $860 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

11.7. The planning, research and training activities specified will form the scientific and technological means for implementing the programme, as well as its output. The systems, methodology and know-how generated by the programme will help improve efficiency. Some of the specific steps involved should include:

(a) Analysing achievements, constraints and social issues for supporting programme formulation and implementation;

(b) Analysing research problems and research needs, research planning and implementation of specific research projects;

(c) Assessing needs for human resources, skill development and training;

(d) Developing, testing and applying appropriate methodologies/approaches in implementing forest programmes and plans.

(c) Human resource development

11.8. The specific components of forest education and training will effectively contribute to human resource development. These include:

(a) Launching of graduate and post-graduate degree, specialization and research programmes;

(b) Strengthening of pre-service, in-service and extension service training programmes at the technical and vocational levels, including training of trainers/teachers, and developing curriculum and teaching materials/methods;

(c) Special training for staff of national forest-related organizations in aspects such as project formulation, evaluation and periodical evaluations.

(d) Capacity-building

11.9. This programme area is specifically concerned with capacity-building in the forest sector and all programme activities specified contribute to that

end. In building new and strengthened capacities, full advantage should be taken of the existing systems and experience.

B. Enhancing the protection, sustainable management and conservation of all forests, and the greening of degraded areas, through forest rehabilitation, afforestation, reforestation and other rehabilitative means

Basis for action

11.10. Forests world wide have been and are being threatened by uncontrolled degradation and conversion to other types of land uses, influenced by increasing human needs; agricultural expansion; and environmentally harmful mismanagement, including, for example, lack of adequate forest-fire control and anti-poaching measures, unsustainable commercial logging, overgrazing and unregulated browsing, harmful effects of airborne pollutants, economic incentives and other measures taken by other sectors of the economy. The impacts of loss and degradation of forests are in the form of soil erosion; loss of biological diversity, damage to wildlife habitats and degradation of watershed areas, deterioration of the quality of life and reduction of the options for development.

11.11. The present situation calls for urgent and consistent action for conserving and sustaining forest resources. The greening of suitable areas, in all its component activities, is an effective way of increasing public awareness and participation in protecting and managing forest resources. It should include the consideration of land use and tenure patterns and local needs and should spell out and clarify the specific objectives of the different types of greening activities.

Objectives

11.12. The objectives of this programme area are as follows:

(a) To maintain existing forests through conservation and management, and sustain and expand areas under forest and tree cover, in appropriate areas of both developed and developing countries, through the conservation of natural forests, protection, forest rehabilitation, regeneration, afforestation, reforestation and tree planting, with a view to maintaining or restoring the ecological balance and expanding the contribution of forests to human needs and welfare;

(b) To prepare and implement, as appropriate, national forestry action programmes and/or plans for the management, conservation and sustainable development of forests. These programmes and/or plans should be integrated with other land uses. In this context, country-driven national forestry action programmes and/or plans under the Tropical Forestry Action Programme are currently being implemented in more than 80 countries, with the support of the international community;

(c) To ensure sustainable management and, where appropriate, conservation of existing and future forest resources;

(d) To maintain and increase the ecological, biological, climatic, socio-cultural and economic contributions of forest resources;

(e) To facilitate and support the effective implementation of the non-legally binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests, adopted by the United Nations Conference on Environment and Development, and on the basis of the implementation of these principles to consider the need for and the feasibility of all kinds of appropriate internationally agreed arrangements to promote international cooperation on forest management, conservation and sustainable development of all types of forests, including afforestation, reforestation and rehabilitation.

Activities

(a) Management-related activities

11.13. Governments should recognize the importance of categorizing forests, within the framework of long-term forest conservation and management policies, into different forest types and setting up sustainable units in every region/watershed with a view to securing the conservation of forests. Governments, with the participation of the private sector, non-governmental organizations, local community groups, indigenous people, women, local government units and the public at large, should act to maintain and expand the existing vegetative cover wherever ecologically, socially and economically feasible, through technical cooperation and other forms of support. Major activities to be considered include:

(a) Ensuring the sustainable management of all forest ecosystems and woodlands, through improved proper planning, management and timely implementation of silvicultural operations, including inventory and relevant research, as well as rehabilitation of degraded natural forests to restore productivity and environmental contributions, giving particular attention to human needs for economic and ecological services, wood-based energy, agroforestry, non-timber forest products and services, watershed and soil protection, wildlife management, and forest genetic resources;

(b) Establishing, expanding and managing, as appropriate to each national context, protected area systems, which includes systems of conservation units for their environmental, social and spiritual functions and values, including conservation of forests in representative ecological systems and landscapes, primary old-growth forests, conservation and management of wildlife, nomination of World Heritage Sites under the World Heritage Convention, as appropriate, conservation of genetic resources, involving *in situ* and *ex situ* measures and undertaking supportive measures to ensure sustainable utilization of biological resources and conservation of biological diversity and the traditional forest habitats of indigenous people, forest dwellers and local communities;

(c) Undertaking and promoting buffer and transition zone management;

(d) Carrying out revegetation in appropriate mountain areas, highlands, bare lands, degraded farm lands, arid and semi-arid lands and coastal areas for combating desertification and preventing erosion problems and for other protective functions and national programmes for rehabilitation of degraded lands, including community forestry, social forestry, agroforestry and silvipasture, while also taking into account the role of forests as national carbon reservoirs and sinks;

(e) Developing industrial and non-industrial planted forests in order to support and promote national ecologically sound afforestation and reforestation/regeneration programmes in suitable sites, including upgrading of existing planted forests of both industrial and non-industrial and commercial purpose to increase their contribution to human needs and to offset pressure on primary/old growth forests. Measures should be taken to promote and provide intermediate yields and to improve the rate of returns on investments in planted forests, through interplanting and underplanting valuable crops;

(f) Developing/strengthening a national and/or master plan for planted forests as a priority, indicating, inter alia, the location, scope and species, and specifying areas of existing planted forests requiring rehabilitation, taking into account the economic aspect for future planted forest development, giving emphasis to native species;

(g) Increasing the protection of forests from pollutants, fire, pests and diseases and other human-made interferences such as forest poaching, mining and unmitigated shifting cultivation, the uncontrolled introduction of exotic plant and animal species, as well as developing and accelerating research for a better understanding of problems relating to the management and regeneration of all types of forests; strengthening and/or establishing appropriate measures to assess and/or check inter-border movement of plants and related materials;

(h) Stimulating development of urban forestry for the greening of urban, peri-urban and rural human settlements for amenity, recreation and production purposes and for protecting trees and groves;

(i) Launching or improving opportunities for participation of all people, including youth, women, indigenous people and local communities in the formulation, development and implementation of forest-related programmes and other activities, taking due account of the local needs and cultural values;

(j) Limiting and aiming to halt destructive shifting cultivation by addressing the underlying social and ecological causes.

(b) Data and information

11.14. Management-related activities should involve collection, compilation and analysis of data/information, including baseline surveys. Some of the specific activities include the following:

(a) Carrying out surveys and developing and implementing land-use plans for appropriate greening/planting/afforestation/reforestation/forest rehabilitation;

(b) Consolidating and updating land-use and forest inventory and management information for management and land-use planning of wood and non-wood resources, including data on shifting cultivation and other agents of forest destruction;

(c) Consolidating information on genetic resources and related biotechnology, including surveys and studies, as necessary;

(d) Carrying out surveys and research on local/indigenous knowledge of trees and forests and their uses to improve the planning and implementation of sustainable forest management;

(e) Compiling and analysing research data on species/site interaction of species used in planted forests and assessing the potential impact on forests of climatic change, as well as effects of forests on climate, and initiating in-depth studies on the carbon cycle relating to different forest types to provide scientific advice and technical support;

(f) Establishing linkages with other data/information sources that relate to sustainable management and use of forests and improving access to data and information;

(g) Developing and intensifying research to improve knowledge and understanding of problems and natural mechanisms related to the management and rehabilitation of forests, including research on fauna and its interrelation with forests;

(h) Consolidating information on forest conditions and site-influencing immissions and emissions.

(c) International and regional cooperation and coordination

11.15. The greening of appropriate areas is a task of global importance and impact. The international and regional community should provide technical cooperation and other means for this programme area. Specific activities of an international nature, in support of national efforts, should include the following:

(a) Increasing cooperative actions to reduce pollutants and trans-boundary impacts affecting the health of trees and forests and conservation of representative ecosystems;

(b) Coordinating regional and subregional research on carbon sequestration, air pollution and other environmental issues;

(c) Documenting and exchanging information/experience for the benefit of countries with similar problems and prospects;

(d) Strengthening the coordination and improving the capacity and ability of intergovernmental organizations such as FAO, ITTO, UNEP and UNESCO to provide technical support for the management, conservation and sustainable development of forests, including support for the negotiation of the International Tropical Timber Agreement of 1983, due in 1992/93.

Means of implementation

(a) Financial and cost evaluation

11.16. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $10 billion, including about $3.7 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

11.17. Data analysis, planning, research, transfer/development of technology and/or training activities form an integral part of the programme activities, providing the scientific and technological means of implementation. National institutions should:

(a) Develop feasibility studies and operational planning related to major forest activities;

(b) Develop and apply environmentally sound technology relevant to the various activities listed;

(c) Increase action related to genetic improvement and application of biotechnology for improving productivity and tolerance to environmental stress and including, for example, tree breeding, seed technology, seed procurement networks, germ-plasm banks, "in vitro" techniques, and in situ and ex situ conservation.

(c) Human resource development

11.18. Essential means for effectively implementing the activities include training and development of appropriate skills, working facilities and conditions, public motivation and awareness. Specific activities include:

(a) Providing specialized training in planning, management, environmental conservation, biotechnology etc.;

(b) Establishing demonstration areas to serve as models and training facilities;

(c) Supporting local organizations, communities, non-governmental organizations and private land owners, in particular women, youth, farmers and indigenous people/shifting cultivators, through extension and provision of inputs and training.

(d) Capacity-building

11.19. National Governments, the private sector, local organizations/communities, indigenous people, labour unions and non-governmental organizations should develop capacities, duly supported by relevant international organizations, to implement the programme activities. Such capacities should be developed and strengthened in harmony with the programme activities. Capacity-building activities include policy and legal frameworks, national institution building, human resource development, development of research and technology, development of infrastructure, enhancement of public awareness etc.

C. Promoting efficient utilization and assessment to recover the full valuation of the goods and services provided by forests, forest lands and woodlands

Basis for action

11.20. The vast potential of forests and forest lands as a major resource for development is not yet fully realized. The improved management of forests can increase the production of goods and services and, in particular, the yield of wood and non-wood forest products, thus helping to generate additional employment and income, additional value through processing and trade of forest products, increased contribution to foreign exchange earnings, and increased return on investment. Forest resources, being renewable, can be sustainably managed in a manner that is compatible with environmental conservation. The implications of the harvesting of forest resources for the other values of the forest should be taken fully into consideration in the development of forest policies. It is also possible to increase the value of forests through non-damaging uses such as eco-tourism and the managed supply of genetic materials. Concerted action is needed in order to increase people's perception of the value of forests and of the benefits they provide. The survival of forests and their continued contribution to human welfare depends to a great extent on succeeding in this endeavour.

Objectives

11.21. The objectives of this programme area are as follows:

(a) To improve recognition of the social, economic and ecological values of trees, forests and forest lands, including the consequences of the damage caused by the lack of forests; to promote methodologies with a view to incorporating social, economic and ecological values of trees, forests and forest lands into the national economic accounting systems; to ensure their sustainable management in a way that is consistent with land use, environmental considerations and development needs;

(b) To promote efficient, rational and sustainable utilization of all types of forests and vegetation inclusive of other related lands and forest-based resources, through the development of efficient forest-based processing industries, value-adding secondary processing and trade in forest products, based on sustainably managed forest resources and in accordance with plans that integrate all wood and non-wood values of forests;

(c) To promote more efficient and sustainable use of forests and trees for fuelwood and energy supplies;

(d) To promote more comprehensive use and economic contributions of forest areas by incorporating eco-tourism into forest management and planning.

Activities

(a) Management-related activities

11.22. Governments, with the support of the private sector, scientific institutions, indigenous people, non-governmental organizations, cooperatives and entrepreneurs, where appropriate, should undertake the following activities, properly coordinated at the national level, with financial and technical cooperation from international organizations:

(a) Carrying out detailed investment studies, supply-demand harmonization and environmental impact analysis to rationalize and improve trees and forest utilization and to develop and establish appropriate incentive schemes and regulatory measures, including tenurial arrangements, to provide a favourable investment climate and promote better management;

(b) Formulating scientifically sound criteria and guidelines for the management, conservation and sustainable development of all types of forests;

(c) Improving environmentally sound methods and practices of forest harvesting, which are ecologically sound and economically viable, including planning and management, improved use of equipment, storage and transportation to reduce and, if possible, maximize the use of waste and improve value of both wood and non-wood forest products;

(d) Promoting the better use and development of natural forests and woodlands, including planted forests, wherever possible, through appropriate and environmentally sound and economically viable activities, including silvicultural practices and management of other plant and animal species;

(e) Promoting and supporting the downstream processing of forest products to increase retained value and other benefits;

(f) Promoting/popularizing non-wood forest products and other forms of forest resources, apart from fuelwood (e.g., medicinal plants, dyes, fibres, gums, resins, fodder, cultural products, rattan, bamboo) through programmes and social forestry/participatory forest activities, including research on their processing and uses;

(g) Developing, expanding and/or improving the effectiveness and efficiency of forest-based processing industries, both wood and non-wood based, involving such aspects as efficient conversion technology and improved sustainable utilization of harvesting and process residues; promoting underutilized species in natural forests through research, demonstration and commercialization; promoting value-adding secondary processing for improved employment, income and retained value; and promoting/improving markets for, and trade in, forest products through relevant institutions, policies and facilities;

(h) Promoting and supporting the management of wildlife, as well as eco-tourism, including farming, and encouraging and supporting the husbandry and cultivation of wild species, for improved rural income and employment, ensuring economic and social benefits without harmful ecological impacts;

(i) Promoting appropriate small-scale forest-based enterprises for supporting rural development and local entrepreneurship;

(j) Improving and promoting methodologies for a comprehensive assessment that will capture the full value of forests, with a view to including that value in the market-based pricing structure of wood and non-wood based products;

(k) Harmonizing sustainable development of forests with national development needs and trade policies that are compatible with the ecologically sound use of forest resources, using, for example, the ITTO Guidelines for Sustainable Management of Tropical Forests;

(l) Developing, adopting and strengthening national programmes for accounting the economic and non-economic value of forests.

(b) Data and information

11.23. The objectives and management-related activities presuppose data and information analysis, feasibility studies, market surveys and review of technological information. Some of the relevant activities include:

(a) Undertaking analysis of supply and demand for forest products and services, to ensure efficiency in their utilization, wherever necessary;

(b) Carrying out investment analysis and feasibility studies, including environmental impact assessment, for establishing forest-based processing enterprises;

(c) Conducting research on the properties of currently underutilized species for their promotion and commercialization;

(d) Supporting market surveys of forest products for trade promotion and intelligence;

(e) Facilitating the provision of adequate technological information as a measure to promote better utilization of forest resources.

(c) International and regional cooperation and coordination

11.24. Cooperation and assistance of international organizations and the international community in technology transfer, specialization and promotion of fair terms of trade, without resorting to unilateral restrictions and/or bans on forest products contrary to GATT and other multilateral trade agreements, the application of appropriate market mechanisms and incentives will help in addressing global environmental concerns. Strengthening the coordination and performance of existing international organizations, in particular FAO, UNIDO, UNESCO, UNEP, ITC/UNCTAD/GATT, ITTO and ILO, for providing technical assistance and guidance in this programme area is another specific activity.

Means of implementation

(a) Financial and cost evaluation

11.25. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $18 billion, including about $880 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

11.26. The programme activities presuppose major research efforts and studies, as well as improvement of technology. This should be coordinated by national Governments, in collaboration with and supported by relevant international organizations and institutions. Some of the specific components include:

(a) Research on properties of wood and non-wood products and their uses, to promote improved utilization;

(b) Development and application of environmentally sound and less-polluting technology for forest utilization;

(c) Models and techniques of outlook analysis and development planning;

(d) Scientific investigations on the development and utilization of non-timber forest products;

(e) Appropriate methodologies to comprehensively assess the value of forests.

(c) Human resource development

11.27. The success and effectiveness of the programme area depends on the availability of skilled personnel. Specialized training is an important factor in this regard. New emphasis should be given to the incorporation of women. Human resource development for programme implementation, in quantitative and qualitative terms, should include:

(a) Developing required specialized skills to implement the programme, including establishing special training facilities at all levels;

(b) Introducing/strengthening refresher training courses, including fellowships and study tours, to update skills and technological know-how and improve productivity;

(c) Strengthening capability for research, planning, economic analysis, periodical evaluations and evaluation, relevant to improved utilization of forest resources;

(d) Promoting efficiency and capability of private and cooperative sectors through provision of facilities and incentives.

(d) Capacity-building

11.28. Capacity-building, including strengthening of existing capacity, is implicit in the programme activities. Improving administration, policy and plans, national institutions, human resources, research and scientific capabilities, technology development, and periodical evaluations and evaluation are important components of capacity-building.

D. Establishing and/or strengthening capacities for the planning, assessment and systematic observations of forests and related programmes, projects and activities, including commercial trade and processes

Basis for action

11.29. Assessment and systematic observations are essential components of long-term planning, for evaluating effects, quantitatively and qualitatively, and for rectifying inadequacies. This mechanism, however, is one of the often neglected aspects of forest resources, management, conservation and development. In many cases, even the basic information related to the area and type of forests, existing potential and volume of harvest is lacking. In many developing countries, there is a lack of structures and mechanisms to carry out these functions. There is an urgent need to rectify this situation for a better understanding of the role and importance of forests and to realistically plan for their effective conservation, management, regeneration, and sustainable development.

Objectives

11.30. The objectives of this programme area are as follows:

(a) To strengthen or establish systems for the assessment and systematic observations of forests and forest lands with a view to assessing the impacts of programmes, projects and activities on the quality and extent of forest resources, land available for afforestation, and land tenure, and to integrate the systems in a continuing process of research and in-depth analysis, while ensuring necessary modifications and improvements for planning and decision-making. Specific emphasis should be given to the participation of rural people in these processes;

(b) To provide economists, planners, decision makers and local communities with sound and adequate updated information on forests and forest land resources.

Activities

(a) Management-related activities

11.31. Governments and institutions, in collaboration, where necessary, with appropriate international agencies and organizations, universities and non-governmental organizations, should undertake assessments and systematic observations of forests and related programmes and processes with a view to their continuous improvement. This should be linked to related activities of research and management and, wherever possible, be built upon existing systems. Major activities to be considered are:

(a) Assessing and carrying out systematic observations of the quantitative and qualitative situation and changes of forest cover and forest

resources endowments, including land classification, land use and updates of its status, at the appropriate national level, and linking this activity, as appropriate, with planning as a basis for policy and programme formulation;

(b) Establishing national assessment and systematic observation systems and evaluation of programmes and processes, including establishment of definitions, standards, norms and intercalibration methods, and the capability for initiating corrective actions as well as improving the formulation and implementation of programmes and projects;

(c) Making estimates of impacts of activities affecting forestry developments and conservation proposals, in terms of key variables such as developmental goals, benefits and costs, contributions of forests to other sectors, community welfare, environmental conditions and biological diversity and their impacts at the local, regional and global levels, where appropriate, to assess the changing technological and financial needs of countries;

(d) Developing national systems of forest resource assessment and valuation, including necessary research and data analysis, which account for, where possible, the full range of wood and non-wood forest products and services, and incorporating results in plans and strategies and, where feasible, in national systems of accounts and planning;

(e) Establishing necessary intersectoral and programme linkages, including improved access to information, in order to support a holistic approach to planning and programming.

(b) Data and information

11.32. Reliable data and information are vital to this programme area. National Governments, in collaboration, where necessary, with relevant international organizations, should, as appropriate, undertake to improve data and information continuously and to ensure its exchange. Major activities to be considered are as follows:

(a) Collecting, consolidating and exchanging existing information and establishing baseline information on aspects relevant to this programme area;

(b) Harmonizing the methodologies for programmes involving data and information activities to ensure accuracy and consistency;

(c) Undertaking special surveys on, for example, land capability and suitability for afforestation action;

(d) Enhancing research support and improving access to and exchange of research results.

(c) International and regional cooperation and coordination

11.33. The international community should extend to the Governments concerned necessary technical and financial support for implementing this programme area, including consideration of the following activities:

(a) Establishing conceptual framework and formulating acceptable criteria, norms and definitions for systematic observations and assessment of forest resources;

(b) Establishing and strengthening national institutional coordination mechanisms for forest assessment and systematic observation activities;

(c) Strengthening existing regional and global networks for the exchange of relevant information;

(d) Strengthening the capacity and ability and improving the performance of existing international organizations, such as the Consultative Group on International Agricultural Research (CGIAR), FAO, ITTO, UNEP, UNESCO and UNIDO, to provide technical support and guidance in this programme area.

Means of implementation

(a) Financial and cost evaluation

11.34. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $750 million, including about $230 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

11.35. Accelerating development consists of implementing the management-related and data/information activities cited above. Activities related to global environmental issues are those that will contribute to global information for assessing/evaluating/addressing environmental issues on a worldwide basis. Strengthening the capacity of international institutions consists of enhancing the technical staff and the executing capacity of several international organizations in order to meet the requirements of countries.

(b) Scientific and technological means

11.36. Assessment and systematic observation activities involve major research efforts, statistical modelling and technological innovation. These have been internalized into the management-related activities. The activities in turn will improve the technological and scientific content of assessment and periodical evaluations. Some of the specific scientific and technological components included under these activities are:

(a) Developing technical, ecological and economic methods and models related to periodical evaluations and evaluation;

(b) Developing data systems, data processing and statistical modelling;

(c) Remote sensing and ground surveys;

(d) Developing geographic information systems;

(e) Assessing and improving technology.

11.37. These are to be linked and harmonized with similar activities and components in the other programme areas.

(c) Human resource development

11.38. The programme activities foresee the need and include provision for human resource development in terms of specialization (e.g., the use of remote-sensing, mapping and statistical modelling), training, technology transfer, fellowships and field demonstrations.

(d) Capacity-building

11.39. National Governments, in collaboration with appropriate international organizations and institutions, should develop the necessary capacity for implementing this programme area. This should be harmonized with capacity-building for other programme areas. Capacity-building should cover such aspects as policies, public administration, national-level institutions, human resource and skill development, research capability, technology development, information systems, programme evaluation, intersectoral coordination and international cooperation.

(e) Funding of international and regional cooperation

11.40. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $750 million, including about $530 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

Chapter 12

MANAGING FRAGILE ECOSYSTEMS: COMBATING DESERTIFICATION AND DROUGHT

INTRODUCTION

12.1. Fragile ecosystems are important ecosystems, with unique features and resources. Fragile ecosystems include deserts, semi-arid lands, mountains, wetlands, small islands and certain coastal areas. Most of these ecosystems are regional in scope, as they transcend national boundaries. This chapter addresses land resource issues in deserts, as well as arid, semi-arid and dry sub-humid areas. Sustainable mountain development is addressed in chapter 13; small islands and coastal areas are discussed in chapter 17.

12.2. Desertification is land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities. Desertification affects about one sixth of the world's population, 70 per cent of all drylands, amounting to 3.6 billion hectares, and one quarter of the total land area of the world. The most obvious impact of desertification, in addition to widespread poverty, is the degradation of 3.3 billion hectares of the total area of rangeland, constituting 73 per cent of the rangeland with a low potential for human and animal carrying capacity; decline in soil fertility and soil structure on about 47 per cent of the dryland areas constituting marginal rainfed cropland; and the degradation of irrigated cropland, amounting to 30 per cent of the dryland areas with a high population density and agricultural potential.

12.3. The priority in combating desertification should be the implementation of preventive measures for lands that are not yet degraded, or which are only slightly degraded. However, the severely degraded areas should not be neglected. In combating desertification and drought, the participation of local communities, rural organizations, national Governments, non-governmental organizations and international and regional organizations is essential.

12.4. The following programme areas are included in this chapter:

(a) Strengthening the knowledge base and developing information and monitoring systems for regions prone to desertification and drought, including the economic and social aspects of these ecosystems;

(b) Combating land degradation through, inter alia, intensified soil conservation, afforestation and reforestation activities;

(c) Developing and strengthening integrated development programmes for the eradication of poverty and promotion of alternative livelihood systems in areas prone to desertification;

(d) Developing comprehensive anti-desertification programmes and integrating them into national development plans and national environmental planning;

(e) Developing comprehensive drought preparedness and drought-relief schemes, including self-help arrangements, for drought-prone areas and designing programmes to cope with environmental refugees;

(f) Encouraging and promoting popular participation and environmental education, focusing on desertification control and management of the effects of drought.

PROGRAMME AREAS

A. Strengthening the knowledge base and developing information and monitoring systems for regions prone to desertification and drought, including the economic and social aspects of these ecosystems

Basis for action

12.5. The global assessments of the status and rate of desertification conducted by the United Nations Environment Programme (UNEP) in 1977, 1984 and 1991 have revealed insufficient basic knowledge of desertification processes. Adequate world-wide systematic observation systems are helpful for the development and implementation of effective anti-desertification programmes. The capacity of existing international, regional and national institutions, particularly in developing countries, to generate and exchange relevant information is limited. An integrated and coordinated information and systematic observation system based on appropriate technology and embracing global, regional, national and local levels is essential for understanding the dynamics of desertification and drought processes. It is also important for developing adequate measures to deal with desertification and drought and improving socio-economic conditions.

Objectives

12.6. The objectives of this programme area are:

(a) To promote the establishment and/or strengthening of national environmental information coordination centres that will act as focal points within Governments for sectoral ministries and provide the necessary standardization and back-up services; to ensure also that national environmental information systems on desertification and drought are linked together through a network at subregional, regional and interregional levels;

(b) To strengthen regional and global systematic observation networks linked to the development of national systems for the observation of land degradation and desertification caused both by climate fluctuations and by human impact, and to identify priority areas for action;

(c) To establish a permanent system at both national and international levels for monitoring desertification and land degradation with the aim of improving living conditions in the affected areas.

Activities

(a) Management-related activities

12.7. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Establish and/or strengthen environmental information systems at the national level;

(b) Strengthen national, state/provincial and local assessment and ensure cooperation/networking between existing environmental information and monitoring systems, such as Earthwatch and the Sahara and Sahel Observatory;

(c) Strengthen the capacity of national institutions to analyse environmental data so that ecological change can be monitored and environmental information obtained on a continuing basis at the national level.

(b) Data and information

12.8. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Review and study the means for measuring the ecological, economic and social consequences of desertification and land degradation and introduce the results of these studies internationally into desertification and land degradation assessment practices;

(b) Review and study the interactions between the socio-economic impacts of climate, drought and desertification and utilize the results of these studies to secure concrete action.

12.9. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Support the integrated data collection and research work of programmes related to desertification and drought problems;

(b) Support national, regional and global programmes for integrated data collection and research networks carrying out assessment of soil and land degradation;

(c) Strengthen national and regional meteorological and hydrological networks and monitoring systems to ensure adequate collection of basic information and communication among national, regional and international centres.

(c) International and regional cooperation and coordination

12.10. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Strengthen regional programmes and international cooperation, such as the Permanent Inter-State Committee on Drought Control in the Sahel (CILSS), the Intergovernmental Authority for Drought and Development (IGADD), the Southern African Development Coordination Conference (SADCC), the Arab Maghreb Union and other regional organizations, as well as such organizations as the Sahara and Sahel Observatory;

(b) Establish and/or develop a comprehensive desertification, land degradation and human condition database component that incorporates both physical and socio-economic parameters. This should be based on existing and, where necessary, additional facilities, such as those of Earthwatch and other information systems of international, regional and national institutions strengthened for this purpose;

(c) Determine benchmarks and define indicators of progress that facilitate the work of local and regional organizations in tracking progress in the fight for anti-desertification. Particular attention should be paid to indicators of local participation.

Means of implementation

(a) Financing and cost evaluation

12.11. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $350 million, including about $175 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

12.12. Governments at the appropriate level, with the support of the relevant international and regional organizations working on the issue of desertification and drought, should:

(a) Undertake and update existing inventories of natural resources, such as energy, water, soil, minerals, plant and animal access to food, as well as other resources, such as housing, employment, health, education and demographic distribution in time and space;

(b) Develop integrated information systems for environmental monitoring, accounting and impact assessment;

(c) International bodies should cooperate with national Governments to facilitate the acquisition and development of appropriate technology for monitoring and combating drought and desertification.

(c) Human resource development

12.13. Governments at the appropriate level, with the support of the relevant international and regional organizations working on the issue of desertification and drought, should develop the technical and professional skills of people engaged in monitoring and assessing the issue of desertification and drought.

(d) Capacity-building

12.14. Governments at the appropriate level, with the support of the relevant international and regional organizations working on the issue of desertification and drought, should:

(a) Strengthen national and local institutions by providing adequate staff equipment and finance for assessing desertification;

(b) Promote the involvement of the local population, particularly women and youth, in the collection and utilization of environmental information through education and awareness-building.

B. Combating land degradation through, inter alia, intensified soil conservation, afforestation and reforestation activities

Basis for action

12.15. Desertification affects about 3.6 billion hectares, which is about 70 per cent of the total area of the world's drylands or nearly one quarter of the global land area. In combating desertification on rangeland, rainfed cropland and irrigated land, preventative measures should be launched in areas which are not yet affected or are only slightly affected by desertification; corrective measures should be implemented to sustain the productivity of moderately desertified land; and rehabilitative measures should be taken to recover severely or very severely desertified drylands.

12.16. An increasing vegetation cover would promote and stabilize the hydrological balance in the dryland areas and maintain land quality and land productivity. Prevention of not yet degraded land and application of corrective measures and rehabilitation of moderate and severely degraded drylands, including areas affected by sand dune movements, through the introduction of environmentally sound, socially acceptable, fair and economically feasible land-use systems. This will enhance the land carrying capacity and maintenance of biotic resources in fragile ecosystems.

Objectives

12.17. The objectives of this programme area are:

(a) As regards areas not yet affected or only slightly affected by desertification, to ensure appropriate management of existing natural formations (including forests) for the conservation of biodiversity, watershed protection, sustainability of their production and agricultural development, and other purposes, with the full participation of indigenous people;

(b) To rehabilitate moderately to severely desertified drylands for productive utilization and sustain their productivity for agropastoral/agroforestry development through, inter alia, soil and water conservation;

(c) To increase the vegetation cover and support management of biotic resources in regions affected or prone to desertification and drought, notably through such activities as afforestation/reforestation, agroforestry, community forestry and vegetation retention schemes;

(d) To improve management of forest resources, including woodfuel, and to reduce woodfuel consumption through more efficient utilization, conservation and the enhancement, development and use of other sources of energy, including alternative sources of energy.

Activities

(a) Management-related activities

12.18. Governments at the appropriate level, and with the support of the relevant international and regional organizations, should:

(a) Implement urgent direct preventive measures in drylands that are vulnerable but not yet affected, or only slightly desertified drylands, by introducing (i) improved land-use policies and practices for more sustainable land productivity; (ii) appropriate, environmentally sound and economically feasible agricultural and pastoral technologies; and (iii) improved management of soil and water resources;

(b) Carry out accelerated afforestation and reforestation programmes, using drought-resistant, fast-growing species, in particular native ones, including legumes and other species, combined with community-based agroforestry schemes. In this regard, creation of large-scale reforestation and afforestation schemes, particularly through the establishment of green belts, should be considered, bearing in mind the multiple benefits of such measures;

(c) Implement urgent direct corrective measures in moderately to severely desertified drylands, in addition to the measures listed in paragraph 19 (a) above, with a view to restoring and sustaining their productivity;

(d) Promote improved land/water/crop-management systems, making it possible to combat salinization in existing irrigated croplands; and to stabilize rainfed croplands and introduce improved soil/crop-management systems into land-use practice;

(e) Promote participatory management of natural resources, including rangeland, to meet both the needs of rural populations and conservation purposes, based on innovative or adapted indigenous technologies;

(f) Promote in situ protection and conservation of special ecological areas through legislation and other means for the purpose of combating desertification while ensuring the protection of biodiversity;

(g) Promote and encourage investment in forestry development in drylands through various incentives, including legislative measures;

(h) Promote the development and use of sources of energy which will lessen pressure on ligneous resources, including alternative sources of energy and improved stoves.

(b) Data and information

12.19. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Develop land-use models based on local practices for the improvement of such practices, with a focus on preventing land degradation. The models should give a better understanding of the variety of natural and human-induced factors that may contribute to desertification. Models should incorporate the interaction of both new and traditional practices to prevent land degradation and reflect the resilience of the whole ecological and social system;

(b) Develop, test and introduce, with due regard to environmental security considerations, drought resistant, fast-growing and productive plant species appropriate to the environment of the regions concerned.

(c) International and regional cooperation and coordination

12.20. The appropriate United Nations agencies, international and regional organizations, non-governmental organizations and bilateral agencies should:

(a) Coordinate their roles in combating land degradation and promoting reforestation, agroforestry and land-management systems in affected countries;

(b) Support regional and subregional activities in technology development and dissemination, training and programme implementation to arrest dryland degradation.

12.21. The national Governments concerned, the appropriate United Nations agencies and bilateral agencies should strengthen the coordinating role in

dryland degradation of subregional intergovernmental organizations set up to cover these activities, such as CILSS, IGADD, SADCC and the Arab Maghreb Union.

Means of implementation

(a) Financing and cost evaluation

12.22. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $6 billion, including about $3 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

12.23. Governments at the appropriate level and local communities, with the support of the relevant international and regional organizations, should:

(a) Integrate indigenous knowledge related to forests, forest lands, rangeland and natural vegetation into research activities on desertification and drought;

(b) Promote integrated research programmes on the protection, restoration and conservation of water and land resources and land-use management based on traditional approaches, where feasible.

(c) Human resource development

12.24. Governments at the appropriate level and local communities, with the support of the relevant international and regional organizations, should:

(a) Establish mechanisms to ensure that land users, particularly women, are the main actors in implementing improved land use, including agroforestry systems, in combating land degradation;

(b) Promote efficient extension-service facilities in areas prone to desertification and drought, particularly for training farmers and pastoralists in the improved management of land and water resources in drylands.

(d) Capacity-building

12.25. Governments at the appropriate level and local communities, with the support of the relevant international and regional organizations, should:

(a) Develop and adopt, through appropriate national legislation, and introduce institutionally, new and environmentally sound development-oriented land-use policies;

(b) Support community-based people's organizations, especially farmers and pastoralists.

C. Developing and strengthening integrated development programmes for the eradication of poverty and promotion of alternative livelihood systems in areas prone to desertification

Basis for action

12.26. In areas prone to desertification and drought, current livelihood and resource-use systems are not able to maintain living standards. In most of the arid and semi-arid areas, the traditional livelihood systems based on agropastoral systems are often inadequate and unsustainable, particularly in view of the effects of drought and increasing demographic pressure. Poverty is a major factor in accelerating the rate of degradation and desertification. Action is therefore needed to rehabilitate and improve the agropastoral systems for sustainable management of rangelands, as well as alternative livelihood systems.

Objectives

12.27. The objectives of this programme area are:

(a) To create the capacity of village communities and pastoral groups to take charge of their development and the management of their land resources on a socially equitable and ecologically sound basis;

(b) To improve production systems in order to achieve greater productivity within approved programmes for conservation of national resources and in the framework of an integrated approach to rural development;

(c) To provide opportunities for alternative livelihoods as a basis for reducing pressure on land resources while at the same time providing additional sources of income, particularly for rural populations, thereby improving their standard of living.

Activities

(a) Management-related activities

12.28. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Adopt policies at the national level regarding a decentralized approach to land-resource management, delegating responsibility to rural organizations;

(b) Create or strengthen rural organizations in charge of village and pastoral land management;

(c) Establish and develop local, national and intersectoral mechanisms to handle environmental and developmental consequences of land tenure expressed in terms of land use and land ownership. Particular attention should be given to protecting the property rights of women and pastoral and nomadic groups living in rural areas;

(d) Create or strengthen village associations focused on economic activities of common pastoral interest (market gardening, transformation of agricultural products, livestock, herding, etc.);

(e) Promote rural credit and mobilization of rural savings through the establishment of rural banking systems;

(f) Develop infrastructure, as well as local production and marketing capacity, by involving the local people to promote alternative livelihood systems and alleviate poverty;

(g) Establish a revolving fund for credit to rural entrepreneurs and local groups to facilitate the establishment of cottage industries/business ventures and credit for input to agropastoral activities.

(b) Data and information

12.29. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Conduct socio-economic baseline studies in order to have a good understanding of the situation in the programme area regarding, particularly, resource and land tenure issues, traditional land-management practices and characteristics of production systems;

(b) Conduct inventory of natural resources (soil, water and vegetation) and their state of degradation, based primarily on the knowledge of the local population (e.g., rapid rural appraisal);

(c) Disseminate information on technical packages adapted to the social, economic and ecological conditions of each;

(d) Promote exchange and sharing of information concerning the development of alternative livelihoods with other agro-ecological regions.

(c) International and regional cooperation and coordination

12.30. Governments at the appropriate level, and with the support of the relevant international and regional organizations, should:

(a) Promote cooperation and exchange of information among the arid and semi-arid land research institutions concerning techniques and technologies to improve land and labour productivity, as well as viable production systems;

(b) Coordinate and harmonize the implementation of programmes and projects funded by the international organization communities and non-governmental organizations that are directed towards the alleviation of poverty and promotion of an alternative livelihood system.

Means of implementation

(a) Financing and cost evaluation

12.31. The Conference secretariat has estimated the costs for this programme area in chapter 3 (Combating poverty) and chapter 14 (Promoting sustainable agriculture and rural development).

(b) Scientific and technological means

12.32. Governments at the appropriate level, and with the support of the relevant international and regional organizations, should:

(a) Undertake applied research in land use with the support of local research institutions;

(b) Facilitate regular national, regional and interregional communication on and exchange of information and experience between extension officers and researchers;

(c) Support and encourage the introduction and use of technologies for the generation of alternative sources of incomes.

(c) Human resource development

12.33. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Train members of rural organizations in management skills and train agropastoralists in such special techniques as soil and water conservation, water harvesting, agroforestry and small-scale irrigation;

(b) Train extension agents and officers in the participatory approach to integrated land management.

(d) Capacity-building

12.34. Governments at the appropriate level, with the support of the relevant international and regional organizations, should establish and maintain mechanisms to ensure the integration into sectoral and national development plans and programmes of strategies for poverty alleviation among the inhabitants of lands prone to desertification.

D. Developing comprehensive anti-desertification programmes and integrating them into national development plans and national environmental planning

Basis for action

12.35. In a number of developing countries affected by desertification, the natural resource base is the main resource upon which the development process must rely. The social systems interacting with land resources make the problem much more complex, requiring an integrated approach to the planning and management of land resources. Action plans to combat desertification and drought should include management aspects of the environment and development, thus conforming with the approach of integrating national development plans and national environmental action plans.

Objectives

12.36. The objectives of this programme area are:

(a) To strengthen national institutional capabilities to develop appropriate anti-desertification programmes and to integrate them into national development planning;

(b) To develop and integrate strategic planning frameworks for the development, protection and management of natural resources in dryland areas into national development plans, including national plans to combat desertification, and environmental action plans in countries most prone to desertification;

(c) To initiate a long-term process for implementing and monitoring strategies related to natural resources management;

(d) To strengthen regional and international cooperation for combating desertification through, *inter alia*, the adoption of legal and other instruments.

Activities

(a) Management-related activities

12.37. Governments at the appropriate level, and with the support of the relevant international and regional organizations, should:

(a) Establish or strengthen, national and local anti-desertification authorities within government and local executive bodies, as well as local committees/associations of land users, in all rural communities affected, with a view to organizing working cooperation between all actors concerned, from the grass-roots level (farmers and pastoralists) to the higher levels of government;

(b) Develop national plans of action to combat desertification and as appropriate, make them integral parts of national development plans and national environmental action plans;

(c) Implement policies directed towards improving land use, managing common lands appropriately, providing incentives to small farmers and pastoralists, involving women and encouraging private investment in the development of drylands;

(d) Ensure coordination among ministries and institutions working on anti-desertification programmes at national and local levels.

(b) Data and information

12.38. Governments at the appropriate level, and with the support of the relevant international and regional organizations, should promote information exchange and cooperation with respect to national planning and programming among affected countries, inter alia, through networking.

(c) International and regional cooperation and coordination

12.39. The relevant international organizations, multilateral financial institutions, non-governmental organizations and bilateral agencies should strengthen their cooperation in assisting with the preparation of desertification control programmes and their integration into national planning strategies, with the establishment of national coordinating and systematic observation mechanisms and with the regional and global networking of these plans and mechanisms.

12.40. The General Assembly, at its forty-seventh session, should be requested to establish, under the aegis of the General Assembly, an intergovernmental negotiating committee for the elaboration of an international convention to combat desertification in in those countries experiencing serious drought and/or desertification, particularly in Africa, with a view to finalizing such a convention by June 1994.

Means of implementation

(a) Financing and cost evaluation

12.41. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $180 million, including about $90 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

12.42. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Develop and introduce appropriate improved sustainable agricultural and pastoral technologies that are socially and environmentally acceptable and economically feasible;

(b) Undertake applied study on the integration of environmental and developmental activities into national development plans.

(c) Human resource development

12.43. Governments at the appropriate level, with the support of the relevant international and regional organizations, should undertake nationwide major anti-desertification awareness/training campaigns within countries affected through existing national mass media facilities, educational networks and newly created or strengthened extension services. This should ensure people's access to knowledge of desertification and drought and to national plans of action to combat desertification.

(d) Capacity-building

12.44. Governments at the appropriate level, with the support of the relevant international and regional organizations, should establish and maintain mechanisms to ensure coordination of sectoral ministries and institutions, including local-level institutions and appropriate non-governmental organizations, in integrating anti-desertification programmes into national development plans and national environmental action plans.

E. Developing comprehensive drought preparedness and drought-relief schemes, including self-help arrangements, for drought-prone areas and designing programmes to cope with environmental refugees

Basis for action

12.45. Drought, in differing degrees of frequency and severity, is a recurring phenomenon throughout much of the developing world, especially Africa. Apart from the human toll - an estimated 3 million people died in the mid-1980s because of drought in sub-Saharan Africa - the economic costs of drought-related disasters are also high in terms of lost production, misused inputs and diversion of development resources.

12.46. Early-warning systems to forecast drought will make possible the implementation of drought-preparedness schemes. Integrated packages at the farm and watershed level, such as alternative cropping strategies, soil and water conservation and promotion of water harvesting techniques, could enhance

the capacity of land to cope with drought and provide basic necessities, thereby minimizing the number of environmental refugees and the need for emergency drought relief. At the same time, contingency arrangements for relief are needed for periods of acute scarcity.

Objectives

12.47. The objectives of this programme area are:

(a) To develop national strategies for drought preparedness in both the short and long term, aimed at reducing the vulnerability of production systems to drought;

(b) To strengthen the flow of early-warning information to decision makers and land users to enable nations to implement strategies for drought intervention;

(c) To develop and integrate drought-relief schemes and means of coping with environmental refugees into national and regional development planning.

Activities

(a) Management-related activities

12.48. In drought-prone areas, Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Design strategies to deal with national food deficiencies in periods of production shortfall. These strategies should deal with issues of storage and stocks, imports, port facilities, food storage, transport and distribution;

(b) Improve national and regional capacity for agrometeorology and contingency crop planning. Agrometeorology links the frequency, content and regional coverage of weather forecasts with the requirements of crop planning and agricultural extension;

(c) Prepare rural projects for providing short-term rural employment to drought-affected households. The loss of income and entitlement to food is a common source of distress in times of drought. Rural works help to generate the income required to buy food for poor households;

(d) Establish contingency arrangements, where necessary, for food and fodder distribution and water supply;

(e) Establish budgetary mechanisms for providing, at short notice, resources for drought relief;

(f) Establish safety nets for the most vulnerable households.

(b) Data and information

12.49. Governments of affected countries, at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Implement research on seasonal forecasts to improve contingency planning and relief operations and allow preventive measures to be taken at the farm level, such as the selection of appropriate varieties and farming practices, in times of drought;

(b) Support applied research on ways of reducing water loss from soils, on ways of increasing the water absorption capacities of soils and on water harvesting techniques in drought-prone areas;

(c) Strengthen national early-warning systems, with particular emphasis on the area of risk-mapping, remote-sensing, agrometeorological modelling, integrated multidisciplinary crop-forecasting techniques and computerized food supply/demand analysis.

(c) International and regional cooperation and coordination

12.50. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Establish a system of stand-by capacities in terms of foodstock, logistical support, personnel and finance for a speedy international response to drought-related emergencies;

(b) Support programmes of the World Meteorological Organization (WMO) on agrohydrology and agrometeorology, the Programme of the Regional Training Centre for Agrometeorology and Operational Hydrology and their Applications (AGRHYMET), drought-monitoring centres and the African Centre of Meteorological Applications for Development (ACMAD), as well as the efforts of the Permanent Inter-State Committee on Drought Control in the Sahel (CILSS) and the Intergovernmental Authority for Drought and Development (IGADD);

(c) Support FAO programmes and other programmes for the development of national early-warning systems and food security assistance schemes;

(d) Strengthen and expand the scope of existing regional programmes and the activities of appropriate United Nations organs and organizations, such as the World Food Programme (WFP), the Office of the United Nations Disaster Relief Coordinator (UNDRO) and the United Nations Sudano-Sahelian Office as well as of non-governmental organizations, aimed at mitigating the effects of drought and emergencies.

Means of implementation

(a) Financing and cost evaluation

12.51. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $1.2 billion, including about $1.1 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

12.52. Governments at the appropriate level and drought-prone communities, with the support of the relevant international and regional organizations, should:

(a) Use traditional mechanisms to cope with hunger as a means of channelling relief and development assistance;

(b) Strengthen and develop national, regional and local interdisciplinary research and training capabilities for drought-prevention strategies.

(c) Human resource development

12.53. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Promote the training of decision makers and land users in the effective utilization of information from early-warning systems;

(b) Strengthen research and national training capabilities to assess the impact of drought and to develop methodologies to forecast drought.

(d) Capacity-building

12.54. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Improve and maintain mechanisms with adequate staff, equipment and finances for monitoring drought parameters to take preventive measures at regional, national and local levels;

(b) Establish interministerial linkages and coordinating units for drought monitoring, impact assessment and management of drought-relief schemes.

F. Encouraging and promoting popular participation and environmental education, focusing on desertification control and management of the effects of drought

Basis for action

12.55. The experience to date on the successes and failures of programmes and projects points to the need for popular support to sustain activities related to desertification and drought control. But it is necessary to go beyond the theoretical ideal of popular participation and to focus on obtaining actual active popular involvement, rooted in the concept of partnership. This implies the sharing of responsibilities and the mutual involvement of all parties. In this context, this programme area should be considered an essential supporting component of all desertification-control and drought-related activities.

Objectives

12.56. The objectives of this programme area are:

(a) To develop and increase public awareness and knowledge concerning desertification and drought, including the integration of environmental education in the curriculum of primary and secondary schools;

(b) To establish and promote true partnership between government authorities, at both the national and local levels, other executing agencies, non-governmental organizations and land users stricken by drought and desertification, giving land users a responsible role in the planning and execution processes in order to benefit fully from development projects;

(c) To ensure that the partners understand one another's needs, objectives and points of view by providing a variety of means such as training, public awareness and open dialogue;

(d) To support local communities in their own efforts in combating desertification, and to draw on the knowledge and experience of the populations concerned, ensuring the full participation of women and indigenous populations.

Activities

(a) Management-related activities

12.57. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Adopt policies and establish administrative structures for more decentralized decision-making and implementation;

(b) Establish and utilize mechanisms for the consultation and involvement of land users and for enhancing capability at the grass-roots

level to identify and/or contribute to the identification and planning of action;

(c) Define specific programme/project objectives in cooperation with local communities; design local management plans to include such measures of progress, thereby providing a means of altering project design or changing management practices, as appropriate;

(d) Introduce legislative, institutional/organizational and financial measures to secure user involvement and access to land resources;

(e) Establish and/or expand favourable conditions for the provision of services, such as credit facilities and marketing outlets for rural populations;

(f) Develop training programmes to increase the level of education and participation of people, particularly women and indigenous groups, through, inter alia, literacy and the development of technical skills;

(g) Create rural banking systems to facilitate access to credit for rural populations, particularly women and indigenous groups, and to promote rural savings;

(h) Adopt appropriate policies to stimulate private and public investment.

(b) Data and information

12.58. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Review, develop and disseminate gender-disaggregated information, skills and know-how at all levels on ways of organizing and promoting popular participation;

(b) Accelerate the development of technological know-how, focusing on appropriate and intermediate technology;

(c) Disseminate knowledge about applied research results on soil and water issues, appropriate species, agricultural techniques and technological know-how.

(c) International and regional cooperation and coordination

12.59. Governments at the appropriate level, and with the support of the relevant international and regional organizations, should:

(a) Develop programmes of support to regional organizations such as CILSS, IGADD, SADCC and the Arab Maghreb Union and other intergovernmental organizations in Africa and other parts of the world, to strengthen outreach

programmes and increase the participation of non-governmental organizations together with rural populations;

(b) Develop mechanisms for facilitating cooperation in technology and promote such cooperation as an element of all external assistance and activities related to technical assistance projects in the public or private sector;

(c) Promote collaboration among different actors in environment and development programmes;

(d) Encourage the emergence of representative organizational structures to foster and sustain interorganizational cooperation.

Means of implementation

(a) Financing and cost evaluation

12.60. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $1.0 billion, including about $500 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

12.61. Governments at the appropriate level, and with the support of the relevant international and regional organizations, should promote the development of indigenous know-how and technology transfer.

(c) Human resource development

12.62. Governments, at the appropriate level, and with the support of the relevant international and regional organizations, should:

(a) Support and/or strengthen institutions involved in public education, including the local media, schools and community groups;

(b) Increase the level of public education.

(d) Capacity-building

12.63. Governments at the appropriate level, and with the support of the relevant international and regional organizations, should promote members of local rural organizations and train and appoint more extension officers working at the local level.

Chapter 13

MANAGING FRAGILE ECOSYSTEMS: SUSTAINABLE MOUNTAIN DEVELOPMENT

INTRODUCTION

13.1. Mountains are an important source of water, energy and biological diversity. Furthermore, they are a source of such key resources as minerals, forest products and agricultural products and of recreation. As a major ecosystem representing the complex and interrelated ecology of our planet, mountain environments are essential to the survival of the global ecosystem. Mountain ecosystems are, however, rapidly changing. They are susceptible to accelerated soil erosion, landslides and rapid loss of habitat and genetic diversity. On the human side, there is widespread poverty among mountain inhabitants and loss of indigenous knowledge. As a result, most global mountain areas are experiencing environmental degradation. Hence, the proper management of mountain resources and socio-economic development of the people deserves immediate action.

13.2. About 10 per cent of the world's population depends on mountain resources. A much larger percentage draws on other mountain resources, including and especially water. Mountains are a storehouse of biological diversity and endangered species.

13.3. Two programme areas are included in this chapter to further elaborate the problem of fragile ecosystems with regard to all mountains of the world. These are:

(a) Generating and strengthening knowledge about the ecology and sustainable development of mountain ecosystems;

(b) Promoting integrated watershed development and alternative livelihood opportunities.

PROGRAMME AREAS

A. Generating and strengthening knowledge about the ecology and sustainable development of mountain ecosystems

Basis for action

13.4. Mountains are highly vulnerable to human and natural ecological imbalance. Mountains are the areas most sensitive to all climatic changes in the atmosphere. Specific information on ecology, natural resource potential and socio-economic activities is essential. Mountain and hillside areas hold a rich variety of ecological systems. Because of their vertical dimensions, mountains create gradients of temperature, precipitation and insolation. A given mountain slope may include several climatic systems - such as tropical,

subtropical, temperate and alpine - each of which represents a microcosm of a larger habitat diversity. There is, however, a lack of knowledge of mountain ecosystems. The creation of a global mountain database is therefore vital for launching programmes that contribute to the sustainable development of mountain ecosystems.

Objectives

13.5. The objectives of this programme area are:

(a) To undertake a survey of the different forms of soils, forest, water use, crop, plant and animal resources of mountain ecosystems, taking into account the work of existing international and regional organizations;

(b) To maintain and generate database and information systems to facilitate the integrated management and environmental assessment of mountain ecosystems, taking into account the work of existing international and regional organizations;

(c) To improve and build the existing land/water ecological knowledge base regarding technologies and agricultural and conservation practices in the mountain regions of the world, with the participation of local communities;

(d) To create and strengthen the communications network and information clearing-house for existing organizations concerned with mountain issues;

(e) To improve coordination of regional efforts to protect fragile mountain ecosystems through the consideration of appropriate mechanisms, including regional legal and other instruments;

(f) To generate information to establish databases and information systems to facilitate an evaluation of environmental risks and natural disasters in mountain ecosystems.

Activities

(a) Management-related activities

13.6. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Strengthen existing institutions or establish new ones at local, national and regional levels to generate a multidisciplinary land/water ecological knowledge base on mountain ecosystems;

(b) Promote national policies that would provide incentives to local people for the use and transfer of environment-friendly technologies and farming and conservation practices;

(c) Build up the knowledge base and understanding by creating mechanisms for cooperation and information exchange among national and regional institutions working on fragile ecosystems;

(d) Encourage policies that would provide incentives to farmers and local people to undertake conservation and regenerative measures;

(e) Diversify mountain economies, inter alia, by creating and/or strengthening tourism, in accordance with integrated management of mountain areas;

(f) Integrate all forest, rangeland and wildlife activities in such a way that specific mountain ecosystems are maintained;

(g) Establish appropriate natural reserves in representative species-rich sites and areas.

(b) Data and information

13.7. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Maintain and establish meteorological, hydrological and physical monitoring analysis and capabilities that would encompass the climatic diversity as well as water distribution of various mountain regions of the world;

(b) Build an inventory of different forms of soils, forests, water use, and crop, plant and animal genetic resources, giving priority to those under threat of extinction. Genetic resources should be protected in situ by maintaining and establishing protected areas and improving traditional farming and animal husbandry activities and establishing programmes for evaluating the potential value of the resources;

(c) Identify hazardous areas that are most vulnerable to erosion, floods, landslides, earthquakes, snow avalanches and other natural hazards;

(d) Identify mountain areas threatened by air pollution from neighbouring industrial and urban areas.

(c) International and regional cooperation

13.8. National Governments and intergovernmental organizations should:

(a) Coordinate regional and international cooperation and facilitate an exchange of information and experience among the specialized agencies, the World Bank, IFAD and other international and regional organizations, national Governments, research institutions and non-governmental organizations working on mountain development;

(b) Encourage regional, national and international networking of people's initiatives and the activities of international, regional and local non-governmental organizations working on mountain development, such as the United Nations University (UNU), the Woodland Mountain Institutes (WMI), the International Center for Integrated Mountain Development (ICIMOD), the International Mountain Society (IMS), the African Mountain Association and the Andean Mountain Association, besides supporting those organizations in exchange of information and experience;

(c) Protect Fragile Mountain Ecosystem through the consideration of appropriate mechanisms including regional legal and other instruments.

Means of implementation

(a) Financing and cost evaluation

13.9. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $50 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

13.10. Governments at the appropriate level, with the support of the relevant international and regional organizations, should strengthen scientific research and technological development programmes, including diffusion through national and regional institutions, particularly in meteorology, hydrology, forestry, soil sciences and plant sciences.

(c) Human resource development

13.11. Governments at the appropriate level, and with the support of the relevant international and regional organizations, should:

(a) Launch training and extension programmes in environmentally appropriate technologies and practices that would be suitable to mountain ecosystems;

(b) Support higher education through fellowships and research grants for environmental studies in mountains and hill areas, particularly for candidates from indigenous mountain populations;

(c) Undertake environmental education for farmers, in particular for women, to help the rural population better understand the ecological issues regarding the sustainable development of mountain ecosystems.

(d) Capacity-building

13.12. Governments at the appropriate level, with the support of the relevant international and regional organizations, should build up national and regional institutional bases that could carry out research, training and dissemination of information on the sustainable development of the economies of fragile ecosystems.

B. Promoting integrated watershed development and alternative livelihood opportunities

Basis for action

13.13. Nearly half of the world's population is affected in various ways by mountain ecology and the degradation of watershed areas. About 10 per cent of the Earth's population lives in mountain areas with higher slopes, while about 40 per cent occupies the adjacent medium- and lower-watershed areas. There are serious problems of ecological deterioration in these watershed areas. For example, in the hillside areas of the Andean countries of South America a large portion of the farming population is now faced with a rapid deterioration of land resources. Similarly, the mountain and upland areas of the Himalayas, South-East Asia and East and Central Africa, which make vital contributions to agricultural production, are threatened by cultivation of marginal lands due to expanding population. In many areas this is accompanied by excessive livestock grazing, deforestation and loss of biomass cover.

13.14. Soil erosion can have a devastating impact on the vast numbers of rural people who depend on rainfed agriculture in the mountain and hillside areas. Poverty, unemployment, poor health and bad sanitation are widespread. Promoting integrated watershed development programmes through effective participation of local people is a key to preventing further ecological imbalance. An integrated approach is needed for conserving, upgrading and using the natural resource base of land, water, plant, animal and human resources. In addition, promoting alternative livelihood opportunities, particularly through development of employment schemes that increase the productive base, will have a significant role in improving the standard of living among the large rural population living in mountain ecosystems.

Objectives

13.15. The objectives of this programme area are:

(a) By the year 2000, to develop appropriate land-use planning and management for both arable and non-arable land in mountain-fed watershed areas to prevent soil erosion, increase biomass production and maintain the ecological balance;

(b) To promote income-generating activities, such as sustainable tourism, fisheries and environmentally sound mining, and to improve infrastructure and social services, in particular to protect the livelihoods of local communities and indigenous people;

(c) To develop technical and institutional arrangements for affected countries to mitigate the effects of natural disasters through hazard-prevention measures, risk zoning, early-warning systems, evacuation plans and emergency supplies.

Activities

(a) Management-related activities

13.16. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Undertake measures to prevent soil erosion and promote erosion-control activities in all sectors;

(b) Establish task forces or watershed development committees, complementing existing institutions, to coordinate integrated services to support local initiatives in animal husbandry, forestry, horticulture and rural development at all administrative levels;

(c) Enhance popular participation in the management of local resources through appropriate legislation;

(d) Support non-governmental organizations and other private groups assisting local organizations and communities in the preparation of projects that would enhance participatory development of local people;

(e) Provide mechanisms to preserve threatened areas that could protect wildlife, conserve biological diversity or serve as national parks;

(f) Develop national policies that would provide incentives to farmers and local people to undertake conservation measures and to use environment-friendly technologies;

(g) Undertake income-generating activities in cottage and agro-processing industries, such as the cultivation and processing of medicinal and aromatic plants;

(h) Undertake the above activities, taking into account the need for full participation of women, including indigenous people and local communities, in development.

(b) Data and information

13.17. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Maintain and establish systematic observation and evaluation capacities at the national, state or provincial level to generate information for daily operations and to assess the environmental and socio-economic impacts of projects;

(b) Generate data on alternative livelihoods and diversified production systems at the village level on annual and tree crops, livestock, poultry, beekeeping, fisheries, village industries, markets, transport and income-earning opportunities, taking fully into account the role of women and integrating them into the planning and implementation process.

(c) International and regional cooperation

13.18. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Strengthen the role of appropriate international research and training institutes such as the Consultative Group on International Agricultural Research Centers (CGIAR) and the International Board for Soil Research and Management (IBSRAM), as well as regional research centres, such as the Woodland Mountain Institutes and the International Center for Integrated Mountain Development, in undertaking applied research relevant to watershed development;

(b) Promote regional cooperation and exchange of data and information among countries sharing the same mountain ranges and river basins, particularly those affected by mountain disasters and floods;

(c) Maintain and establish partnerships with non-governmental organizations and other private groups working in watershed development.

Means of implementation

(a) Financial and cost evaluation

13.19. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $13 billion, including about $1.9 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

13.20. Financing for the promotion of alternative livelihoods in mountain ecosystems should be viewed as part of a country's anti-poverty or alternative livelihoods programme, which is also discussed in chapter 3 (Combating poverty) and chapter 14 (Promoting sustainable agriculture and rural development) of Agenda 21.

(b) Scientific and technical means

13.21. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Consider undertaking pilot projects that combine environmental protection and development functions with particular emphasis on some of the traditional environmental management practices or systems that have a good impact on the environment;

(b) Generate technologies for specific watershed and farm conditions through a participatory approach involving local men and women, researchers and extension agents who will carry out experiments and trials on farm conditions;

(c) Promote technologies of vegetative conservation measures for erosion prevention, in situ moisture management, improved cropping technology, fodder production and agroforestry that are low-cost, simple and easily adopted by local people.

(c) Human resource development

13.22. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Promote a multidisciplinary and cross-sectoral approach in training and the dissemination of knowledge to local people on a wide range of issues, such as household production systems, conservation and utilization of arable and non-arable land, treatment of drainage lines and recharging of groundwater, livestock management, fisheries, agroforestry and horticulture;

(b) Develop human resources by providing access to education, health, energy and infrastructure;

(c) Promote local awareness and preparedness for disaster prevention and mitigation, combined with the latest available technology for early warning and forecasting.

(d) Capacity-building

13.23. Governments at the appropriate level, with the support of the relevant international and regional organizations, should develop and strengthen national centres for watershed management to encourage a comprehensive approach to the environmental, socio-economic, technological, legislative,

financial and administrative aspects and provide support to policy makers, administrators, field staff and farmers for watershed development.

13.24. The private sector and local communities, in cooperation with national Governments, should promote local infrastructure development, including communication networks, mini- or micro-hydro development to support cottage industries, and access to markets.

Chapter 14

PROMOTING SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT

INTRODUCTION

14.1. By the year 2025, 83 per cent of the expected global population of 8.5 billion will be living in developing countries. Yet the capacity of available resources and technologies to satisfy the demands of this growing population for food and other agricultural commodities remains uncertain. Agriculture has to meet this challenge, mainly by increasing production on land already in use and by avoiding further encroachment on land that is only marginally suitable for cultivation.

14.2. Major adjustments are needed in agricultural, environmental and macroeconomic policy, at both national and international levels, in developed as well as developing countries, to create the conditions for sustainable agriculture and rural development (SARD). The major objective of SARD is to increase food production in a sustainable way and enhance food security. This will involve education initiatives, utilization of economic incentives and the development of appropriate and new technologies, thus ensuring stable supplies of nutritionally adequate food, access to those supplies by vulnerable groups, and production for markets; employment and income generation to alleviate poverty; and natural resource management and environmental protection.

14.3. The priority must be on maintaining and improving the capacity of the higher potential agricultural lands to support an expanding population. However, conserving and rehabilitating the natural resources on lower potential lands in order to maintain sustainable man/land ratios is also necessary. The main tools of SARD are policy and agrarian reform, participation, income diversification, land conservation and improved management of inputs. The success of SARD will depend largely on the support and participation of rural people, national Governments, the private sector and international cooperation, including technical and scientific cooperation.

14.4. The following programme areas are included in this chapter:

(a) Agricultural policy review, planning and integrated programming in the light of the multifunctional aspect of agriculture, particularly with regard to food security and sustainable development;

(b) Ensuring people's participation and promoting human resource development for sustainable agriculture;

(c) Improving farm production and farming systems through diversification of farm and non-farm employment and infrastructure development;

(d) Land-resource planning information and education for agriculture;

(e) Land conservation and rehabilitation;

(f) Water for sustainable food production and sustainable rural development;

(g) Conservation and sustainable utilization of plant genetic resources for food and sustainable agriculture;

(h) Conservation and sustainable utilization of animal genetic resources for sustainable agriculture;

(i) Integrated pest management and control in agriculture;

(j) Sustainable plant nutrition to increase food production;

(k) Rural energy transition to enhance productivity;

(l) Evaluation of the effects of ultraviolet radiation on plants and animals caused by the depletion of the stratospheric ozone layer.

PROGRAMME AREAS

A. Agricultural policy review, planning and integrated programmes in the light of the multifunctional aspect of agriculture, particularly with regard to food security and sustainable development

Basis for action

14.5. There is a need to integrate sustainable development considerations with agricultural policy analysis and planning in all countries, particularly in developing countries. Recommendations should contribute directly to development of realistic and operational medium- to long-term plans and programmes, and thus to concrete actions. Support to and monitoring of implementation should follow.

14.6. The absence of a coherent national policy framework for sustainable agriculture and rural development (SARD) is widespread and is not limited to the developing countries. In particular the economies in transition from planned to market-oriented systems need such a framework to incorporate environmental considerations into economic activities, including agriculture. All countries need to assess comprehensively the impacts of such policies on food and agriculture sector performance, food security, rural welfare and international trading relations as a means for identifying appropriate offsetting measures. The major thrust of food security in this case is to bring about a significant increase in agricultural production in a sustainable way and to achieve a substantial improvement in people's entitlement to adequate food and culturally appropriate food supplies.

14.7. Sound policy decisions pertaining to international trade and capital flows also necessitate action to overcome: (a) a lack of awareness of the environmental costs incurred by sectoral and macroeconomic policies and hence their threat to sustainability; (b) insufficient skills and experience in incorporating issues of sustainability into policies and programmes; and (c) inadequacy of tools of analysis and monitoring. 1/

Objectives

14.8. The objectives of this Programme area are:

(a) By 1995, to review and, where appropriate, establish a programme to integrate environmental and sustainable development with policy analysis for the food and agriculture sector and relevant macroeconomic policy analysis, formulation and implementation;

(b) To maintain and develop, as appropriate, operational multisectoral plans, programmes and policy measures, including programmes and measures to enhance sustainable food production and food security within the framework of sustainable development, not later than 1998;

(c) To maintain and enhance the ability of developing countries, particularly the least developed ones, to themselves manage policy, programming and planning activities, not later than 2005.

Activities

(a) Management-related activities

14.9. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Carry out national policy reviews related to food security, including adequate levels and stability of food supply and access to food by all households;

(b) Review national and regional agricultural policy in relation, inter alia, to foreign trade, price policy, exchange rate policies, agricultural subsidies and taxes, as well as organization for regional economic integration;

(c) Implement policies to influence land tenure and property rights positively with due recognition of the minimum size of land-holding required to maintain production and check further fragmentation;

(d) Consider demographic trends and population movements and identify critical areas for agricultural production;

(e) Formulate, introduce and monitor policies, laws and regulations and incentives leading to sustainable agricultural and rural development and

improved food security and to the development and transfer of appropriate farm technologies, including, where appropriate, low-input sustainable agricultural (LISA) systems;

(f) Support national and regional early warning systems through food-security assistance schemes that monitor food supply and demand and factors affecting household access to food;

(g) Review policies with respect to improving harvesting, storage, processing, distribution and marketing of products at the local, national and regional levels;

(h) Formulate and implement integrated agricultural projects that include other natural resource activities, such as management of rangelands, forests, and wildlife, as appropriate;

(i) Promote social and economic research and policies that encourage sustainable agriculture development, particularly in fragile ecosystems and densely populated areas;

(j) Identify storage and distribution problems affecting food availability; support research, where necessary, to overcome these problems and cooperate with producers and distributors to implement improved practices and systems.

(b) Data and information

14.10. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Cooperate actively to expand and improve the information on early warning systems on food and agriculture at both regional and national levels;

(b) Examine and undertake surveys and research to establish baseline information on the status of natural resources relating to food and agricultural production and planning in order to assess the impacts of various uses on these resources, and develop methodologies and tools of analysis, such as environmental accounting.

(c) International and regional cooperation and coordination

14.11. United Nations agencies, such as FAO, the World Bank, IFAD and GATT, and regional organizations, bilateral donor agencies and other bodies should, within their respective mandates, assume a role in working with national Governments in the following activities:

(a) Implement integrated and sustainable agricultural development and food security strategies at the subregional level that use regional production and trade potentials, including organizations for regional economic integration, to promote food security;

(b) Encourage, in the context of achieving sustainable agricultural development and consistent with relevant internationally agreed principles on trade and environment, a more open and non-discriminatory trading system and the avoidance of unjustifiable trade barriers which together with other policies will facilitate the further integration of agricultural and environmental policies so as to make them mutually supportive;

(c) Strengthen and establish national, regional and international systems and networks to increase the understanding of the interaction between agriculture and the state of the environment, identify ecologically sound technologies and facilitate the exchange information on data sources, policies, and techniques and tools of analysis.

Means of implementation

(a) Financing and cost evaluation

14.12. The Conference secretariat has estimated the average total annual cost (1993-2000) on implementing the activities of this programme to be about $3 billion, including about $450 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

14.13. Governments at the appropriate level and with the support of the relevant international and regional organizations should assist farming households and communities to apply technologies related to improved food production and security, including storage, monitoring of production and distribution.

(c) Human resource development

14.14. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Involve and train local economists, planners and analysts to initiate national and international policy reviews and develop frameworks for sustainable agriculture;

(b) Establish legal measures to promote access of women to land and remove biases in their involvement in rural development.

(d) Capacity-building

14.15. Governments at the appropriate level, with the support of the relevant international and regional organizations, should strengthen ministries for agriculture, natural resources and planning.

B. Ensuring people's participation and promoting human resource development for sustainable agriculture

Basis for action

14.16. This component bridges policy and integrated resource management. The greater the degree of community control over the resources on which it relies, the greater will be the incentive for economic and human resources development. At the same time, policy instruments to reconcile long-run and short-run requirements must be set by national Governments. The approaches focus on fostering self-reliance and cooperation, providing information and supporting user-based organizations. Emphasis should be on management practices, building agreements for changes in resource utilization, the rights and duties associated with use of land, water and forests, the functioning of markets, prices, and the access to information, capital and inputs. This would require training and capacity-building to assume greater responsibilities in sustainable development efforts. 2/

Objectives

14.17. The objectives of this programme area are:

(a) To promote greater public awareness of the role of people's participation and people's organizations, especially women's groups, youth, indigenous people, local communities and small farmers, in sustainable agriculture and rural development;

(b) To ensure equitable access of rural people, particularly women, small farmers, landless and indigenous people, to land, water and forest resources and to technologies, financing, marketing, processing and distribution;

(c) To strengthen and develop the management and the internal capacities of rural people's organizations and extension services and to decentralize decision-making to the lowest community level.

Activities

(a) Management-related activities

14.18. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Develop and improve integrated agricultural extension services and facilities and rural organizations and undertake natural resource management and food security activities, taking into account the different needs of subsistence agriculture as well as market-oriented crops;

(b) Review and refocus existing measures to achieve wider access to land, water and forest resources and ensure equal rights of women and other disadvantaged groups, with particular emphasis on rural populations, indigenous people and local communities;

(c) Assign clear titles, rights and responsibilities for land and for individuals or communities to encourage investment in land resources;

(d) Develop guidelines for decentralization policies for rural development through reorganization and strengthening of rural institutions;

(e) Develop policies in extension, training, pricing, input distribution, credit and taxation to ensure necessary incentives and equitable access by the poor to production-support services;

(f) Provide support services and training, recognizing the variation in agricultural circumstances and practices by location; the optimal use of on-farm inputs and the minimal use of external inputs; optimal use of local natural resources and management of renewable energy sources; and the establishment of networks that deal with the exchange of information on alternative forms of agriculture.

(b) Data and information

14.19. Governments at the appropriate level, and with the support of the relevant international and regional organizations, should collect, analyse, and disseminate information on human resources, the role of Governments, local communities and non-governmental organizations in social innovation and strategies for rural development.

(c) International and regional cooperation and coordination

14.20. Appropriate international and regional agencies should:

(a) Reinforce their work with non-governmental organizations in collecting and disseminating information on people's participation and people's organizations, testing participatory development methods, training and education for human resource development and strengthening the management structures of rural organizations;

(b) Help develop information available through non-governmental organizations and promote an international ecological agricultural network to accelerate the development and implementation of ecological agriculture practices.

Means of implementation

(a) Financing and cost evaluation

14.21. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $4.4 billion, including about $650 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

14.22. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Encourage people's participation on farm technology development and transfer, incorporating indigenous ecological knowledge and practices;

(b) Launch applied research on participatory methodologies, management strategies and local organizations.

(c) Human resource development

14.23. Governments at the appropriate level, with the support of the relevant international and regional organizations, should provide management and technical training to government administrators and members of resource-user groups in the principles, practice and benefits of people's participation in rural development.

(d) Capacity-building

14.24. Governments at the appropriate level, with the support of the relevant international and regional organizations, should introduce management strategies and mechanisms, such as accounting and audit services for rural people's organizations and institutions for human resource development, and delegate administrative and financial responsibilities to local levels for decision-making, revenue-raising and expenditure.

C. Improving farm production and farming systems through diversification of farm and non-farm employment and infrastructure development

Basis for action

14.25. Agriculture needs to be intensified to meet future demands for commodities and to avoid further expansion onto marginal lands and encroachment on fragile ecosystems. Increased use of external inputs and development of specialized production and farming systems tend to increase vulnerability to environmental stresses and market fluctuations. There is, therefore, a need to intensify agriculture by diversifying the production systems for maximum efficiency in the utilization of local resources, while minimizing environmental and economic risks. Where intensification of farming systems is not possible, other on-farm and off-farm employment opportunities should be identified and developed, such as cottage industries, wildlife utilization, aquaculture and fisheries, non-farm activities, such as light village-based manufacturing, farm commodity processing, agribusiness, recreation and tourism, etc.

Objectives

14.26. The objectives of this programme area are:

(a) To improve farm productivity in a sustainable manner, as well as to increase diversification, efficiency, food security and rural incomes, while ensuring that risks to the ecosystem are minimized;

(b) To enhance the self-reliance of farmers in developing and improving rural infrastructure, and to facilitate the transfer of environmentally sound technologies for integrated production and farming systems, including indigenous technologies and the sustainable use of biological and ecological processes, including agroforestry, sustainable wildlife conservation and management, aquaculture, inland fisheries and animal husbandry;

(c) To create farm and non-farm employment opportunities, particularly among the poor and those living in marginal areas, taking into account the alternative livelihood proposal *inter alia* in dryland areas.

Activities

(a) Management-related activities

14.27. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Develop and disseminate to farming households integrated farm management technologies, such as crop rotation, organic manuring and other techniques involving reduced use of agricultural chemicals, multiple techniques for sources of nutrients and the efficient utilization of external

inputs, while enhancing techniques for waste and by-product utilization and prevention of pre- and post-harvest losses, taking particular note of the role of women;

(b) Create non-farm employment opportunities through private small-scale agro-processing units, rural service centres and related infrastructural improvements;

(c) Promote and improve rural financial networks that utilize investment capital resources raised locally;

(d) Provide the essential rural infrastructure for access to agricultural inputs and services, as well as to national and local markets, and reduce food losses;

(e) Initiate and maintain farm surveys, on-farm testing of appropriate technologies and dialogue with rural communities to identify constraints and bottlenecks and find solutions;

(f) Analyse and identify possibilities for economic integration of agricultural and forestry activities, as well as water and fisheries, and to take effective measures to encourage forest management and growing of trees by farmers (farm forestry) as an option for resource development.

(b) Data and information

14.28. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Analyse the effects of technical innovations and incentives on farm-household income and well-being;

(b) Initiate and maintain on-farm and off-farm programmes to collect and record indigenous knowledge.

(c) International and regional cooperation and coordination

14.29. International institutions, such as FAO and IFAD, international agricultural research centres, such as CGIAR, and regional centres should diagnose the world's major agro-ecosystems, their extension, ecological and socio-economic characteristics, their susceptibility to deterioration and their productive potential. This could form the basis for technology development and exchange and for regional research collaboration.

Means of implementation

(a) Financing and cost evaluation

14.30. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about

$10 billion, including about $1.5 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

14.31. Governments at the appropriate level, with the support of the relevant international and regional organizations, should strengthen research on agricultural production systems in areas with different endowments and agro-ecological zones, including comparative analysis of the intensification, diversification and different levels of external and internal inputs.

(c) Human resource development

14.32. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Promote educational and vocational training for farmers and rural communities through formal and non-formal education;

(b) Launch awareness and training programmes for entrepreneurs, managers, bankers and traders in rural servicing and small-scale agro-processing techniques.

(d) Capacity-building

14.33. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Improve their organizational capacity to deal with issues related to off-farm activities and rural industry development;

(b) Expand credit facilities and rural infrastructure related to processing, transportation and marketing.

D. Land-resource planning, information and education for agriculture

Basis for action

14.34. Inappropriate and uncontrolled land uses are a major cause of degradation and depletion of land resources. Present land use often disregards the actual potentials, carrying capacities and limitations of land resources, as well as their diversity in space. It is estimated that the world's population, now at 5.4 billion, will be 6.25 billion by the turn of the century. The need to increase food production to meet the expanding needs

of the population will put enormous pressure on all natural resources, including land.

14.35. Poverty and malnutrition are already endemic in many regions. The destruction and degradation of agricultural and environmental resources is a major issue. Techniques for increasing production and conserving soil and water resources are already available but are not widely or systematically applied. A systematic approach is needed for identifying land uses and production systems that are sustainable in each land and climate zone, including the economic, social and institutional mechanisms necessary for their implementation. 3/

Objectives

14.36. The objectives of this programme area are:

(a) To harmonize planning procedures, involve farmers in the planning process, collect land-resource data, design and establish databases, define land areas of similar capability, identify resource problems and values that need to be taken into account to establish mechanisms to encourage efficient and environmentally sound use of resources;

(b) To establish agricultural planning bodies at national and local levels to decide priorities, channel resources and implement programmes.

Activities

(a) Management-related activities

14.37. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Establish and strengthen agricultural land-use and land-resource planning, management, education and information at national and local levels;

(b) Initiate and maintain district and village agricultural land-resource planning, management and conservation groups to assist in problem identification, development of technical and management solutions, and project implementation.

(b) Data and information

14.38. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Collect, continuously monitor, update and disseminate information, whenever possible, on the utilization of natural resources and living conditions, climate, water and soil factors, and on land use, distribution of vegetation cover and animal species, utilization of wild plants, production systems and yields, costs and prices, and social and cultural considerations that affect agricultural and adjacent land use;

(b) Establish programmes to provide information, promote discussion and encourage the formation of management groups.

(c) International and regional cooperation and coordination

14.39. The appropriate United Nations agencies and regional organizations should:

(a) Strengthen or establish international, regional and subregional technical working groups with specific terms of reference and budgets to promote the integrated use of land resources for agriculture, planning, data collection and diffusion of simulation models of production and information dissemination;

(b) Develop internationally acceptable methodologies for the establishment of databases, description of land uses and multiple goal optimization.

Means of implementation

(a) Financing and cost evaluation

14.40. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $1.7 billion, including about $250 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

14.41. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Develop databases and geographical information systems to store and display physical, social and economic information pertaining to agriculture, and the definition of ecological zones and development areas;

(b) Select combinations of land uses and production systems appropriate to land units through multiple goal optimization procedures, and strengthen delivery systems and local community participation;

(c) Encourage integrated planning at the watershed and landscape level to reduce soil loss and protect surface and groundwater resources from chemical pollution.

(c) Human resource development

14.42. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Train professionals and planning groups at national, district and village levels through formal and informal instructional courses, travel and interaction;

(b) Generate discussion at all levels on policy, development and environmental issues related to agricultural land use and management, through media programmes, conferences and seminars.

(d) Capacity-building

14.43. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Establish land-resource mapping and planning units at national, district and village levels to act as focal points and links between institutions and disciplines, and between Governments and people;

(b) Establish or strengthen Governments and international institutions with responsibility for agricultural resource survey, management and development; rationalize and strengthen legal frameworks; and provide equipment and technical assistance.

E. Land conservation and rehabilitation

Basis for action

14.44. Land degradation is the most important environmental problem affecting extensive areas of land in both developed and developing countries. The problem of soil erosion is particularly acute in developing countries, while problems of salinization, waterlogging, soil pollution and loss of soil fertility are increasing in all countries. Land degradation is serious because the productivity of huge areas of land is declining just when populations are increasing rapidly and the demand on the land is growing to produce more food, fibre and fuel. Efforts to control land degradation, particularly in developing countries, have had limited success to date. Well planned, long-term national and regional land conservation and rehabilitation programmes, with strong political support and adequate funding, are now needed. While land-use planning and land zoning, combined with better land management, should provide long-term solutions, it is urgent to arrest land degradation and launch conservation and rehabilitation programmes in the most critically affected and vulnerable areas.

Objectives

14.45. The objectives of this programme area are:

(a) By the year 2000, to review and initiate, as appropriate, national land-resource surveys, detailing the location, extent and severity of land degradation;

(b) To prepare and implement comprehensive policies and programmes leading to the reclamation of degraded lands and the conservation of areas at risk, as well as improve the general planning, management and utilization of land resources and preserve soil fertility for sustainable agricultural development.

Activities

(a) Management-related activities

14.46. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Develop and implement programmes to remove and resolve the physical, social and economic causes of land degradation, such as land tenure, appropriate trading systems and agricultural pricing structures, which lead to inappropriate land-use management;

(b) Provide incentives and, where appropriate and possible, resources for the participation of local communities in the planning, implementation and maintenance of their own conservation and reclamation programmes;

(c) Develop and implement programmes for the rehabilitation of land degraded by water-logging and salinity;

(d) Develop and implement programmes for the progressive use of non-cultivated land with agricultural potential in a sustainable way.

(b) Data and information

14.47. Governments, at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Conduct periodic surveys to assess the extent and state of its land resources;

(b) Strengthen and establish national land-resource data banks, including identification of the location, extent and severity of existing land degradation, as well as areas at risk, and evaluate the progress of the conservation and rehabilitation programmes launched in this regard;

(c) Collect and record information on indigenous conservation and rehabilitation practices and farming systems as a basis for research and extension programmes.

(c) International and regional cooperation and coordination

14.48. The appropriate United Nations agencies, regional organizations and non-governmental organizations should:

(a) Develop priority conservation and rehabilitation programmes with advisory services to Governments and regional organizations;

(b) Establish regional and subregional networks for scientists and technicians to exchange experiences, develop joint programmes and spread successful technologies on land conservation and rehabilitation.

Means of implementation

(a) Financing and cost evaluation

14.49. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $5 billion, including about $800 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

14.50. Governments at the appropriate level, with the support of the relevant international and regional organizations, should help farming household communities to investigate and promote site-specific technologies and farming systems that conserve and rehabilitate land, while increasing agricultural production, including conservation tillage agroforestry, terracing and mixed cropping.

(c) Human resource development

14.51. Governments at the appropriate level, with the support of the relevant international and regional organizations, should train field staff and land users in indigenous and modern techniques of conservation and rehabilitation and should establish training facilities for extension staff and land users.

(d) Capacity-building

14.52. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Develop and strengthen national research institutional capacity to identify and implement effective conservation and rehabilitation practices that are appropriate to the existing socio-economic physical conditions of the land users;

(b) Coordinate all land conservation and rehabilitation policies, strategies and programmes with related ongoing programmes, such as national environment action plans, the Tropical Forestry Action Plan and national development programmes.

F. Water for sustainable food production and sustainable rural development

14.53. This programme area is included in chapter 18 (Protection of the quality and supply of freshwater resources), programme area F.

G. Conservation and sustainable utilization of plant genetic resources for food and sustainable agriculture

Basis for action

14.54. Plant genetic resources for agriculture (PGRFA) are an essential resource to meet future needs for food. Threats to the security of these resources are growing, and efforts to conserve, develop and use genetic diversity are underfunded and understaffed. Many existing gene banks provide inadequate security and, in some instances, the loss of plant genetic diversity in gene banks is as great as it is in the field.

14.55. The primary objective is to safeguard the world's genetic resources while preserving them to use sustainably. This includes the development of measures to facilitate the conservation and use of plant genetic resources, networks of *in situ* conservation areas and use of tools such as *ex situ* collections and germ plasma banks. Special emphasis could be placed on the building of endogenous capacity for characterization, evaluation and utilization of PGRFA, particularly for the minor crops and other underutilized or non-utilized species of food and agriculture, including tree species for agro-forestry. Subsequent action could be aimed at consolidation and efficient management of networks of *in situ* conservation areas and use of tools such as *ex situ* collections and germ plasma banks.

14.56. Major gaps and weaknesses exist in the capacity of existing national and international mechanisms to assess, study, monitor and use plant genetic resources to increase food production. Existing institutional capacity, structures and programmes are generally inadequate and largely underfunded. There is genetic erosion of invaluable crop species. Existing diversity in crop species is not used to the extent possible for increased food production in a sustainable way. 4/

Objectives

14.57. The objectives of this programme area are:

(a) To complete the first regeneration and safe duplication of existing ex situ collections on a world-wide basis as soon as possible;

(b) To collect and study plants useful for increasing food production through joint activities, including training, within the framework of networks of collaborating institutions;

(c) Not later than the year 2000, to adopt policies and strengthen or establish programmes for in situ on-farm and ex situ conservation and sustainable use of plant genetic resources for food and agriculture, integrated into strategies and programmes for sustainable agriculture;

(d) To take appropriate measures for the fair and equitable sharing of benefits and results of research and development in plant breeding between the sources and users of plant genetic resources.

Activities

(a) Management-related activities

14.58. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Develop and strengthen institutional capacity, structures and programmes for conservation and use of PGRFA;

(b) Strengthen and establish research in the public domain on PGRFA evaluation and utilization, with the objectives of sustainable agriculture and rural development in view;

(c) Develop multiplication/propagation, exchange and dissemination facilities for PGRFAs (seeds and planting materials), particularly in developing countries and monitor, control and evaluate plant introductions;

(d) Prepare plans or programmes of priority action on conservation and sustainable use of PGRFA, based, as appropriate, on country studies on PGRFA;

(e) Promote crop diversification in agricultural systems where appropriate, including new plants with potential value as food crops;

(f) Promote utilization as well as research on poorly known, but potentially useful, plants and crops, where appropriate;

(g) Strengthen national capabilities for utilization of PGRFA, plant breeding and seed production capabilities, both by specialized institutions and farming communities.

(b) Data and information

14.59. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Develop strategies for networks of in situ conservation areas and use of tools such as on-farm ex situ collections, germplasm banks and related technologies;

(b) Establish ex situ base collection networks;

(c) Review periodically and report on the situation on PGRFA, using existing systems and procedures;

(d) Characterize and evaluate PGRFA material collected, disseminate information to facilitate the use of PGRFA collections and assess genetic variation in collections.

(c) International and regional cooperation and coordination

14.60. The appropriate United Nations agencies and regional organizations should:

(a) Strengthen the Global System on the Conservation and Sustainable Use of PGRFA by, inter alia, accelerating the development of the Global Information and Early Warning System to facilitate the exchange of information; developing ways to promote the transfer of environmentally sound technologies, in particular to developing countries; and taking further steps to realize farmers' rights;

(b) Develop subregional, regional and global networks of PGRFA in situ in protected areas;

(c) Prepare periodic state of the world reports on PGRFA;

(d) Prepare a rolling global cooperative plan of action on PGRFA;

(e) Promote, for 1994, the Fourth International Technical Conference on the Conservation and Sustainable Use of PGRFA, which is to adopt the first state of the world report and the first global plan of action on the conservation and sustainable use of PGRFA;

(f) Adjust the Global System for the Conservation and Sustainable Use of PGRFA in line with the outcome of the negotiations of a convention on biological diversity.

Means of implementation

(a) Financing and cost evaluation

14.61. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $600 million, including about $300 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

14.62. Governments, at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Develop basic science research in such areas as plant taxonomy and phytogeography, utilizing recent developments, such as computer sciences, molecular genetics and in vitro cryopreservation;

(b) Develop major collaborative projects between research programmes in developed and developing countries, particularly for the enhancement of poorly known or neglected crops;

(c) Promote cost-effective technologies for keeping duplicate sets of ex situ collections (which can also be used by local communities);

(d) Develop further conservation sciences in relation to in situ conservation and technical means to link it with ex situ conservation efforts.

(c) Human resource development

14.63. Governments at the appropriate level and with the support of the relevant international and regional organizations should:

(a) Promote training programmes at both undergraduate and post-graduate levels in conservation sciences for running PGRFA facilities and for the design and implementation of national programmes in PGRFA;

(b) Raise the awareness of agricultural extension services in order to link PGRFA activities with user communities;

(c) Develop training materials to promote conservation and utilization of PGRFA at the local level.

(d) Capacity-building

14.64. Governments at the appropriate level, with the support of the relevant international and regional organizations, should establish national policies to provide legal status for and strengthen legal aspects of PGRFA, including long-term financial commitments for germplasm collections and implementation of activities in PGRFA.

H. Conservation and sustainable utilization of animal genetic resources for sustainable agriculture

Basis for action

14.65. The need for increased quantity and quality of animal products and for draught animals calls for conservation of the existing diversity of animal breeds to meet future requirements, including those for use in biotechnology. Some local animal breeds, in addition to their socio-cultural value, have unique attributes for adaptation, disease resistance and specific uses and should be preserved. These local breeds are threatened by extinction as a result of the introduction of exotic breeds and of changes in livestock production systems.

Objectives

14.66. The objectives of this programme area are:

(a) To enumerate and describe all breeds of livestock used in animal agriculture in as broad a way as possible and begin a 10-year programme of action;

(b) To establish and implement action programmes to identify breeds at risk, together with the nature of the risk and appropriate preservation measures;

(c) To establish and implement development programmes for indigenous breeds in order to guarantee their survival, avoiding the risk of their being replaced by breed substitution or cross-breeding programmes.

Activities

(a) Management-related activities

14.67. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Draw up breed preservation plans, for endangered populations, including semen/embryo collection and storage, farm-based conservation of indigenous stock or *in situ* preservation;

(b) Plan and initiate breed development strategies;

(c) Select indigenous populations on the basis of regional importance and genetic uniqueness, for a 10-year programme, followed by selection of an additional cohort of indigenous breeds for development.

(b) Data and information

14.68. Governments at the appropriate level, with the support of the relevant international and regional organizations, should prepare and complete national inventories of available animal genetic resources. Cryogenic storage could be given priority over characterization and evaluation. Training of nationals in conservation and assessment techniques would be given special attention.

(c) International and regional cooperation and coordination

14.69. The appropriate United Nations and other international and regional agencies should:

(a) Promote the establishment of regional gene banks to the extent that they are justified, based on principles of technical cooperation among developing countries;

(b) Process, store and analyse animal genetic data at the global level, including the establishment of a world watch list and an early warning system for endangered breeds; global assessment of scientific and intergovernmental guidance of the programme and review of regional and national activities; development of methodologies, norms and standards (including international agreements); monitoring of their implementation; and related technical and financial assistance;

(c) Prepare and publish a comprehensive database of animal genetic resources, describing each breed, its derivation, its relationship with other breeds, effective population size and a concise set of biological and production characteristics;

(d) Prepare and publish a world watch list on farm animal species at risk to enable national Governments to take action to preserve endangered breeds and to seek technical assistance, where necessary.

Means of implementation

(a) Financing and cost evaluation

14.70. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $200 million, including about $100 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon,

inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

14.71. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Use computer-based data banks and questionnaires to prepare a global inventory/world watch list;

(b) Using cryogenic storage of germplasm, preserve breeds at serious risk and other material from which genes can be reconstructed.

(c) Human resource development

14.72. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Sponsor training courses for nationals to obtain the necessary expertise for data collection and handling and for the sampling of genetic material;

(b) Enable scientists and managers to establish an information base for indigenous livestock breeds and promote programmes to develop and conserve essential livestock genetic material.

(d) Capacity-building

14.73. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Establish in-country facilities for artificial insemination centres and in situ breeding farms;

(b) Promote in-country programmes and related physical infrastructure for animal livestock conservation and breed development, as well as for strengthening national capacities to take preventive action when breeds are endangered.

I. Integrated pest management and control in agriculture

Basis for action

14.74. World food demand projections indicate an increase of 50 per cent by the year 2000 which will more than double again by 2050. Conservative estimates put pre-harvest and post-harvest losses caused by pests between 25 and 50 per cent. Pests affecting animal health also cause heavy losses and in many areas prevent livestock development. Chemical control of agricultural

pests has dominated the scene, but its overuse has adverse effects on farm budgets, human health and the environment, as well as on international trade. New pest problems continue to develop. Integrated pest management, which combines biological control, host plant resistance and appropriate farming practices and minimizes the use of pesticides, is the best option for the future, as it guarantees yields, reduces costs, is environmentally friendly and contributes to the sustainability of agriculture. Integrated pest management should go hand in hand with appropriate pesticide management to allow for pesticide regulation and control, including trade, and for the safe handling and disposal of pesticides, particularly those that are toxic and persistent.

Objectives

14.75. The objectives of this programme area are:

(a) Not later than the year 2000, to improve and implement plant protection and animal health services, including mechanisms to control the distribution and use of pesticides, and to implement the International Code of Conduct on the Distribution and Use of Pesticides;

(b) To improve and implement programmes to put integrated pest-management practices within the reach of farmers through farmer networks, extension services and research institutions;

(c) Not later than the year 1998, to establish operational and interactive networks among farmers, researchers and extension services to promote and develop integrated pest management.

Activities

(a) Management-related activities

14.76. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Review and reform national policies and the mechanisms that would ensure the safe and appropriate use of pesticides - for example, pesticide pricing, pest control brigades, price-structure of inputs and outputs and integrated pest-management policies and action plans;

(b) Develop and adopt efficient management systems to control and monitor the incidence of pests and disease in agriculture and the distribution and use of pesticides at the country level;

(c) Encourage research and development into pesticides that are target-specific and readily degrade into harmless constituent parts after use;

(d) Ensure that pesticide labels provide farmers with understandable information about safe handling, application and disposal.

(b) Data and information

14.77. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Consolidate and harmonize existing information and programmes on the use of pesticides that have been banned or severely restricted in different countries;

(b) Consolidate, document and disseminate information on biological control agents and organic pesticides, as well as on traditional and other relevant knowledge and skills regarding alternative non-chemical ways of controlling pests;

(c) Undertake national surveys to establish baseline information on the use of pesticides in each country and the side-effects on human health and environment, and also undertake appropriate education.

(c) International and regional cooperation and coordination

14.78. Appropriate United Nations agencies and regional organizations should:

(a) Establish a system for collecting, analysing and disseminating data on the quantity and quality of pesticides used every year and their impact on human health and the environment;

(b) Strengthen regional interdisciplinary projects and establish integrated pest management (IPM) networks to demonstrate the social, economic and environmental benefits of IPM for food and cash crops in agriculture;

(c) Develop proper IPM, comprising the selection of the variety of biological, physical and cultural controls, as well as chemical controls, taking into account specific regional conditions.

Means of implementation

(a) Financing and cost evaluation

14.79. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $1.9 billion, including about $285 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

14.80. Governments at the appropriate level, with the support of the relevant international and regional organizations, should launch on-farm research in the development of non-chemical alternative pest management technologies.

(c) Human resource development

14.81. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Prepare and conduct training programmes on approaches and techniques for integrated pest management and control of pesticide use, to inform policy makers, researchers, non-governmental organizations and farmers;

(b) Train extension agents and involve farmers and women's groups in crop health and alternative non-chemical ways of controlling pests in agriculture.

(d) Capacity-building

14.82. Governments at the appropriate level, with the support of the relevant international and regional organizations, should strengthen national public administrations and regulatory bodies in the control of pesticides and the transfer of technology for integrated pest management.

J. Sustainable plant nutrition to increase food production

Basis for action

14.83. Plant nutrient depletion is a serious problem resulting in loss of soil fertility, particularly in developing countries. To maintain soil productivity, the FAO sustainable plant nutrition programmes could be helpful. In sub-Saharan Africa, nutrient output from all sources currently exceeds inputs by a factor of three or four, the net loss being estimated at some 10 million metric tons per year. As a result, more marginal lands and fragile natural ecosystems are put under agricultural use, thus creating further land degradation and other environmental problems. The integrated plant nutrition approach aims at ensuring a sustainable supply of plant nutrients to increase future yields without harming the environment and soil productivity.

14.84. In many developing countries, population growth rates exceed 3 per cent a year, and national agricultural production has fallen behind food demand. In these countries the goal should be to increase agricultural production by at least 4 per cent a year, without destroying the soil fertility. This will require increasing agricultural production in high-potential areas through efficiency in the use of inputs. Trained labour, energy supply, adapted tools and technologies, plant nutrients and soil enrichment will all be essential.

Objectives

14.85. The objectives of this programme area are:

(a) Not later than the year 2000, to develop and maintain in all countries the integrated plant nutrition approach, and to optimize availability of fertilizer and other plant nutrient sources;

(b) Not later than the year 2000, to establish and maintain institutional and human infrastructure to enhance effective decision-making on soil productivity;

(c) To develop and make available national and international know-how to farmers, extension agents, planners and policy makers on environmentally sound new and existing technologies and soil-fertility management strategies for application in promoting sustainable agriculture.

Activities

(a) Management-related activities

14.86. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Formulate and apply strategies that will enhance soil fertility maintenance to meet sustainable agricultural production and adjust the relevant agricultural policy instruments accordingly;

(b) Integrate organic and inorganic sources of plant nutrients in a system to sustain soil fertility and determine mineral fertilizer needs;

(c) Determine plant nutrient requirements and supply strategies and optimize the use of both organic and inorganic sources, as appropriate, to increase farming efficiency and production;

(d) Develop and encourage processes for the recycling of organic and inorganic waste into the soil structure, without harming the environment, plant growth and human health.

(b) Data and information

14.87. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Assess "national accounts" for plant nutrients, including supplies (inputs) and losses (outputs) and prepare balance sheets and projections by cropping systems;

(b) Review technical and economic potentials of plant nutrient sources, including national deposits, improved organic supplies, recycling, wastes, topsoil produced from discarded organic matter and biological nitrogen fixation.

(c) International and regional cooperation and coordination

14.88. The appropriate United Nations agencies, such as FAO, the international agricultural research institutes, and non-governmental organizations should collaborate in carrying out information and publicity campaigns about the integrated plant nutrients approach, efficiency of soil productivity and their relationship to the environment.

Means of implementation

(a) Financing and cost evaluation

14.89. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $3.2 billion, including about $475 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

14.90. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Develop site-specific technologies at benchmark sites and farmers' fields that fit prevailing socio-economic and ecological conditions through research that involves the full collaboration of local populations;

(b) Reinforce interdisciplinary international research and transfer of technology in cropping and farming systems research, improved in situ biomass production techniques, organic residue management and agroforestry technologies.

(c) Human resource development

14.91. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Train extension officers and researchers in plant nutrient management, cropping systems and farming systems, and in economic evaluation of plant nutrient impact;

(b) Train farmers and women's groups in plant nutrition management, with special emphasis on topsoil conservation and production.

(d) Capacity-building

14.92. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Develop suitable institutional mechanisms for policy formulation to monitor and guide the implementation of integrated plant nutrition programmes through an interactive process involving farmers, research, extension services and other sectors of society;

(b) Where appropriate, strengthen existing advisory services and train staff, develop and test new technologies and facilitate the adoption of practices to upgrade and maintain full productivity of the land.

K. Rural energy transition to enhance productivity

Basis for action

14.93. Energy supplies in many countries are not commensurate with their development needs and are highly priced and unstable. In rural areas of the developing countries, the chief sources of energy are fuelwood, crop residues and manure, together with animal and human energy. More intensive energy inputs are required for increased productivity of human labour and for income-generation. To this end, rural energy policies and technologies should promote a mix of cost-effective fossil and renewable energy sources that is itself sustainable and ensures sustainable agricultural development. Rural areas provide energy supplies in the form of wood. The full potential of agriculture and agroforestry, as well as common property resources, as sources of renewable energy, is far from being realized. The attainment of sustainable rural development is intimately linked with energy demand and supply patterns. 5/

Objectives

14.94. The objectives of this programme area are:

(a) Not later than the year 2000, to initiate and encourage a process of environmentally sound energy transition in rural communities, from unsustainable energy sources, to structured and diversified energy sources by making available alternative new and renewable sources of energy;

(b) To increase the energy inputs available for rural household and agro-industrial needs through planning and appropriate technology transfer and development;

(c) To implement self-reliant rural programmes favouring sustainable development of renewable energy sources and improved energy efficiency.

Activities

(a) Management-related activities

14.95. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Promote pilot plans and projects consisting of electrical, mechanical and thermal power (gasifiers, biomass, solar driers, wind-pumps and combustion systems) that are appropriate and likely to be adequately maintained;

(b) Initiate and promote rural energy programmes supported by technical training, banking and related infrastructure;

(c) Intensify research and the development, diversification and conservation of energy, taking into account the need for efficient use and environmentally sound technology.

(b) Data and information

14.96. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Collect and disseminate data on rural energy supply and demand patterns related to energy needs for households, agriculture and agro-industry;

(b) Analyse sectoral energy and production data in order to identify rural energy requirements.

(c) International and regional cooperation and coordination

14.97. The appropriate United Nations agencies and regional organizations should, drawing on the experience and available information of non-governmental organizations in this field, exchange country and regional experience on rural energy planning methodologies in order to promote efficient planning and select cost-effective technologies.

Means of implementation

(a) Financing and cost evaluation

14.98. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $1.8 billion per year, including about $265 million from the international community on grant or concessional terms. These are indicative and

order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

14.99. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Intensify public and private sector research in developing and industrialized countries on renewable sources of energy for agriculture;

(b) Undertake research and transfer of energy technologies in biomass and solar energy to agricultural production and post-harvest activities.

(c) Human resource development

14.100. Governments at the appropriate level, with the support of the relevant international and regional organizations, should enhance public awareness of rural energy problems, stressing the economic and environmental advantages of renewable energy sources.

(d) Capacity-building

14.101. Governments at the appropriate level, with the support of the relevant international and regional organizations, should:

(a) Establish national institutional mechanisms for rural energy planning and management that would improve efficiency in agricultural productivity and reach the village and household level;

(b) Strengthen extension services and local organizations to implement plans and programmes for new and renewable sources of energy at the village level.

L. Evaluation of the effects of ultraviolet radiation on plants and animals caused by the depletion of the stratospheric ozone layer

Basis for action

14.102. The increase of ultraviolet radiation as a consequence of the depletion of the stratospheric ozone layer is a phenomenon that has been recorded in different regions of the world, particularly in the southern hemisphere. Consequently, it is important to evaluate its effects on plant and animal life, as well as on sustainable agricultural development.

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The objective of this programme area is to undertake research to
ıe the effects of increased ultraviolet radiation resulting from
›heric ozone layer depletion on the Earth's surface, and on plant and
.ife in affected regions, as well as its impact on agriculture, and to
as appropriate, strategies aimed at mitigating its adverse effects.

.es

ıagement-related activities

In affected regions, Governments at the appropriate level, with the
of the relevant international and regional organizations, should take
ɜssary measures, through institutional cooperation, to facilitate the
ıtation of research and evaluation regarding the effects of enhanced
›let radiation on plant and animal life, as well as on agricultural
ıes, and consider taking appropriate remedial measures.

Notes

Some of the issues in this programme area are presented in chapter 3
ing poverty).

Some of the issues in this programme area are discussed in chapter 8
ating environment and development in decision-making) and in chapter 37
al mechanisms and international cooperation for capacity-building in
ing countries).

Some of the issues are presented in chapter 10 (Integrated approach
planning and management of land resources).

The activities of this programme area are related to some of the
ies in chapter 15 (Conservation of biological diversity).

The activities of this programme area are related to some of the
ies in chapter 9 (Protection of the atmosphere).

Chapter 15

CONSERVATION OF BIOLOGICAL DIVERSITY

INTRODUCTION

15.1. The objectives and activities in this chapter of Agenda 21 are intended to improve the conservation of biological diversity and the sustainable use of biological resources, as well as to support the Convention on Biological Diversity.

15.2. Our planet's essential goods and services depend on the variety and variability of genes, species, populations and ecosystems. Biological resources feed and clothe us and provide housing, medicines and spiritual nourishment. The natural ecosystems of forests, savannahs, pastures and rangelands, deserts, tundras, rivers, lakes and seas contain most of the Earth's biodiversity. Farmers' fields and gardens are also of great importance as repositories, while gene banks, botanical gardens, zoos and other germplasm repositories make a small but significant contribution. The current decline in biodiversity is largely the result of human activity and represents a serious threat to human development.

PROGRAMME AREA

Conservation of biological diversity

Basis for action

15.3. Despite mounting efforts over the past 20 years, the loss of the world's biological diversity, mainly from habitat destruction, over-harvesting, pollution and the inappropriate introduction of foreign plants and animals, has continued. Biological resources constitute a capital asset with great potential for yielding sustainable benefits. Urgent and decisive action is needed to conserve and maintain genes, species and ecosystems, with a view to the sustainable management and use of biological resources. Capacities for the assessment, study and systematic observation and evaluation of biodiversity need to be reinforced at national and international levels. Effective national action and international cooperation is required for the *in situ* protection of ecosystems, for the *ex situ* conservation of biological and genetic resources and for the enhancement of ecosystem functions. The participation and support of local communities are elements essential to the success of such an approach. Recent advances in biotechnology have pointed up the likely potential for agriculture, health and welfare and for the environmental purposes of the genetic material contained in plants, animals and micro-organisms. At the same time, it is particularly important in this context to stress that States have the sovereign right to exploit their own biological resources pursuant to their environmental policies, as well as the responsibility to conserve their biodiversity and use

their biological resources sustainably, and to ensure that activities within their jurisdiction or control do not cause damage to the biological diversity of other States or of areas beyond the limits of national jurisdiction.

Objectives

15.4. Governments at the appropriate level, with the cooperation of the relevant United Nations bodies and regional, intergovernmental and non-governmental organizations, the private sector and financial institutions, and taking into consideration indigenous people and their communities, as well as social and economic factors, should:

(a) Press for the early entry into force of the Convention on Biological Diversity, with the widest possible participation;

(b) Develop national strategies for the conservation of biological diversity and the sustainable use of biological resources;

(c) Integrate strategies for the conservation of biological diversity and the sustainable use of biological resources into national development strategies and/or plans;

(d) Take appropriate measures for the fair and equitable sharing of benefits derived from research and development and use of biological and genetic resources, including biotechnology, between the sources of those resources and those who use them;

(e) Carry out country studies, as appropriate, on the conservation of biological diversity and the sustainable use of biological resources, including analyses of relevant costs and benefits, with particular reference to socio-economic aspects;

(f) Produce regularly updated world reports on biodiversity based upon national assessments;

(g) Recognize and foster the traditional methods and the knowledge of indigenous people and their communities, emphasizing the particular role of women, relevant to the conservation of biological diversity and the sustainable use of biological resources, and ensure the opportunity for the participation of those groups in the economic and commercial benefits derived from the use of such traditional methods and knowledge; 1/

(h) Implement mechanisms for the improvement, generation, development and sustainable use of biotechnology and its safe transfer, particularly to developing countries, taking account the potential contribution of biotechnology to the conservation of biological diversity and the sustainable use of biological resources; 2/

(i) Promote broader international and regional cooperation in furthering scientific and economic understanding of the importance of biodiversity and its functions in ecosystems;

(j) Develop measures and arrangements to implement the rights of countries of origin of genetic resources or countries providing genetic resources, as defined in the Convention on Biological Diversity, particularly developing countries, to benefit from the biotechnological development and the commercial utilization of products derived from such resources. 2/, 3/

Activities

(a) Management-related activities

15.5. Governments at the appropriate levels, consistent with national policies and practices, with the cooperation of the relevant United Nations bodies and, as appropriate, intergovernmental organizations and, with the support of indigenous people and their communities, non-governmental organizations and other groups, including the business and scientific communities, and consistent with the requirements of international law, should, as appropriate:

(a) Develop new or strengthen existing strategies, plans or programmes of action for the conservation of biological diversity and the sustainable use of biological resources, taking account of education and training needs; 4/

(b) Integrate strategies for the conservation of biological diversity and the sustainable use of biological and genetic resources into relevant sectoral or cross-sectoral plans, programmes and policies, with particular reference to the special importance of terrestrial and aquatic biological and genetic resources for food and agriculture; 5/

(c) Undertake country studies or use other methods to identify components of biological diversity important for its conservation and for the sustainable use of biological resources, ascribe values to biological and genetic resources, identify processes and activities with significant impacts upon biological diversity, evaluate the potential economic implications of the conservation of biological diversity and the sustainable use of biological and genetic resources, and suggest priority action;

(d) Take effective economic, social and other appropriate incentive measures to encourage the conservation of biological diversity and the sustainable use of biological resources, including the promotion of sustainable production systems, such as traditional methods of agriculture, agroforestry, forestry, range and wildlife management, which use, maintain or increase biodiversity; 5/

(e) Subject to national legislation, take action to respect, record, protect and promote the wider application of the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles for the conservation of biological diversity and the sustainable use of biological resources, with a view to the fair and equitable sharing of the benefits arising, and promote mechanisms to involve those communities, including women, in the conservation and management of ecosystems; 1/

(f) Undertake long-term research into the importance of biodiversity for the functioning of ecosystems and the role of ecosystems in producing goods, environmental services and other values supporting sustainable development, with particular reference to the biology and reproductive capacities of key terrestrial and aquatic species, including native, cultivated and cultured species; new observation and inventory techniques; ecological conditions necessary for biodiversity conservation and continued evolution; and social behaviour and nutrition habits dependent on natural ecosystems, where women play key roles. The work should be undertaken with the widest possible participation, especially of indigenous people and their communities, including women; 1/

(g) Take action where necessary for the conservation of biological diversity through the in situ conservation of ecosystems and natural habitats, as well as primitive cultivars and their wild relatives, and the maintenance and recovery of viable populations of species in their natural surroundings, and implement ex situ measures, preferably in the source country. In situ measures should include the reinforcement of terrestrial, marine and aquatic protected area systems and embrace, inter alia, vulnerable freshwater and other wetlands and coastal ecosystems, such as estuaries, coral reefs and mangroves; 6/

(h) Promote the rehabilitation and restoration of damaged ecosystems and the recovery of threatened and endangered species;

(i) Develop policies to encourage the conservation of biodiversity and the sustainable use of biological and genetic resources on private lands;

(j) Promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas;

(k) Introduce appropriate environmental impact assessment procedures for proposed projects likely to have significant impacts upon biological diversity, providing for suitable information to be made widely available and for public participation, where appropriate, and encourage the assessment of the impacts of relevant policies and programmes on biological diversity;

(l) Promote, where appropriate, the establishment and strengthening of national inventory, regulation or management and control systems related to biological resources, at the appropriate level;

(m) Take measures to encourage a greater understanding and appreciation of the value of biological diversity, as manifested both in its component parts and in the ecosystem services provided.

(b) Data and information

15.6. Governments at the appropriate level, consistent with national policies and practices, with the cooperation of the relevant United Nations bodies and,

as appropriate, intergovernmental organizations, and with the support of indigenous people and their communities, non-governmental organizations and other groups, including the business and scientific communities, and consistent with the requirements of international law, should, as appropriate: 7/

(a) Regularly collate, evaluate and exchange information on the conservation of biological diversity and the sustainable use of biological resources;

(b) Develop methodologies with a view to undertaking systematic sampling and evaluation on a national basis of the components of biological diversity identified by means of country studies;

(c) Initiate or further develop methodologies and begin or continue work on surveys at the appropriate level on the status of ecosystems and establish baseline information on biological and genetic resources, including those in terrestrial, aquatic, coastal and marine ecosystems, as well as inventories undertaken with the participation of local and indigenous people and their communities;

(d) Identify and evaluate the potential economic and social implications and benefits of the conservation and sustainable use of terrestrial and aquatic species in each country, building upon the results of country studies;

(e) Undertake the updating, analysis and interpretation of data derived from the identification, sampling and evaluation activities described above;

(f) Collect, assess and make available relevant and reliable information in a timely manner and in a form suitable for decision-making at all levels, with the full support and participation of local and indigenous people and their communities.

(c) International and regional cooperation and coordination

15.7. Governments at the appropriate level, with the cooperation of the relevant United Nations bodies and, as appropriate, intergovernmental organizations, and, with the support of indigenous people and their communities, non-governmental organizations and other groups, including the business and scientific communities, and consistent with the requirements of international law, should, as appropriate:

(a) Consider the establishment or strengthening of national or international capabilities and networks for the exchange of data and information of relevance to the conservation of biological diversity and the sustainable use of biological and genetic resources; 7/

(b) Produce regularly updated world reports on biodiversity based upon national assessments in all countries;

(c) Promote technical and scientific cooperation in the field of conservation of biological diversity and the sustainable use of biological and genetic resources. Special attention should be given to the development and strengthening of national capabilities by means of human resource development and institution-building, including the transfer of technology and/or development of research and management facilities, such as herbaria, museums, gene banks, and laboratories, related to the conservation of biodiversity; 8/

(d) Without prejudice to the relevant provisions of the Convention on Biological Diversity, facilitate for this chapter the transfer of technologies relevant to the conservation of biological diversity and the sustainable use of biological resources or technologies that make use of genetic resources and cause no significant damage to the environment, in conformity with chapter 34, and recognizing that technology includes biotechnology; 2/, 8/

(e) Promote cooperation between the parties to relevant international conventions and action plans with the aim of strengthening and coordinating efforts to conserve biological diversity and the sustainable use of biological resources;

(f) Strengthen support for international and regional instruments, programmes and action plans concerned with the conservation of biological diversity and the sustainable use of biological resources;

(g) Promote improved international coordination of measures for the effective conservation and management of endangered/non-pest migratory species, including appropriate levels of support for the establishment and management of protected areas in transboundary locations;

(h) Promote national efforts with respect to surveys, data collection, sampling and evaluation, and the maintenance of gene banks.

Means of implementation

(a) Financing and cost evaluation

15.8. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this chapter to be about $3.5 billion, including about $1.75 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

15.9. Specific aspects to be addressed include the need to develop:

(a) Efficient methodologies for baseline surveys and inventories, as well as for the systematic sampling and evaluation of biological resources;

(b) Methods and technologies for the conservation of biological diversity and the sustainable use of biological resources;

(c) Improved and diversified methods for ex situ conservation with a view to the long-term conservation of genetic resources of importance for research and development.

(c) Human resource development

15.10. There is a need, where appropriate, to:

(a) Increase the number and/or make more efficient use of trained personnel in scientific and technological fields relevant to the conservation of biological diversity and the sustainable use of biological resources;

(b) Maintain or establish programmes for scientific and technical education and training of managers and professionals, especially in developing countries, on measures for the identification, conservation of biological diversity and the sustainable use of biological resources;

(c) Promote and encourage understanding of the importance of the measures required for the conservation of biological diversity and the sustainable use of biological resources at all policy-making and decision-making levels in Governments, business enterprises and lending institutions, and promote and encourage the inclusion of these topics in educational programmes.

(d) Capacity-building

15.11. There is a need, where appropriate, to:

(a) Strengthen existing institutions and/or establish new ones responsible for the conservation of biological diversity and to consider the development of mechanisms such as national biodiversity institutes or centres;

(b) Continue to build capacity for the conservation of biological diversity and the sustainable use of biological resources in all relevant sectors;

(c) Build capacity, especially within Governments, business enterprises and bilateral and multilateral development agencies, for integrating biodiversity concerns, potential benefits and opportunity cost calculations into project design, implementation and evaluation processes, as well as for evaluating the impact on biological diversity of proposed development projects;

(d) Enhance the capacity of governmental and private institutions, at the appropriate level, responsible for protected area planning and management to undertake intersectoral coordination and planning with other governmental institutions, non-governmental organizations and, where appropriate, indigenous people and their communities.

Notes

1/ See chapter 26 (Recognizing and strengthening the role of indigenous people and their communities) and chapter 24 (Global action for women towards sustainable and equitable development).

2/ See chapter 16 (Environmentally sound management of biotechnology).

3/ Article 2 (Use of terms) of the Convention on Biological Diversity includes the following definitions:

"Country of origin of genetic resources" means the country which possesses those genetic resources in in-situ conditions.

"Country providing genetic resources" means the country supplying genetic resources collected from in-situ sources, including populations of both wild and domesticated species, or taken from ex-situ sources, which may or may not have originated in that country.

4/ See chapter 36 (Promoting education, public awareness and training).

5/ See chapter 14 (Promoting sustainable agriculture and rural development) and chapter 11 (Combating deforestation).

6/ See chapter 17 (Protection of the oceans, all kinds of seas, including enclosed and semi-enclosed seas, and coastal areas and the protection, rational use and development of their living resources).

7/ See chapter 40 (Information for decision-making).

8/ See chapter 34 (Transfer of environmentally sound technology, cooperation and capacity-building).

Chapter 16

ENVIRONMENTALLY SOUND MANAGEMENT OF BIOTECHNOLOGY

INTRODUCTION

16.1. Biotechnology is the integration of the new techniques emerging from modern biotechnology with the well-established approaches of traditional biotechnology. Biotechnology, an emerging knowledge-intensive field, is a set of enabling techniques for bringing about specific man-made changes in deoxyribonucleic acid (DNA), or genetic material, in plants, animals and microbial systems, leading to useful products and technologies. By itself, biotechnology cannot resolve all the fundamental problems of environment and development, so expectations need to be tempered by realism. Nevertheless, it promises to make a significant contribution in enabling the development of, for example, better health care, enhanced food security through sustainable agricultural practices, improved supplies of potable water, more efficient industrial development processes for transforming raw materials, support for sustainable methods of afforestation and reforestation, and detoxification of hazardous wastes. Biotechnology also offers new opportunities for global partnerships, especially between the countries rich in biological resources (which include genetic resources) but lacking the expertise and investments needed to apply such resources through biotechnology and the countries that have developed the technological expertise to transform biological resources so that they serve the needs of sustainable development. 1/ Biotechnology can assist in the conservation of those resources through, for example, ex situ techniques. The programme areas set out below seek to foster internationally agreed principles to be applied to ensure the environmentally sound management of biotechnology, to engender public trust and confidence, to promote the development of sustainable applications of biotechnology and to establish appropriate enabling mechanisms, especially within developing countries, through the following activities:

(a) Increasing the availability of food, feed and renewable raw materials;

(b) Improving human health;

(c) Enhancing protection of the environment;

(d) Enhancing safety and developing international mechanisms for cooperation;

(e) Establishing enabling mechanisms for the development and the environmentally sound application of biotechnology.

A. Increasing the availability of food, feed and renewable raw materials

Basis for action

16.2. To meet the growing consumption needs of the global population, the challenge is not only to increase food supply, but also to improve food distribution significantly while simultaneously developing more sustainable agricultural systems. Much of this increased productivity will need to take place in developing countries. It will require the successful and environmentally safe application of biotechnology in agriculture, in the environment and in human health care. Most of the investment in modern biotechnology has been in the industrialized world. Significant new investments and human resource development will be required in biotechnology, especially in the developing world.

Objectives

16.3. The following objectives are proposed, keeping in mind the need to promote the use of appropriate safety measures based on programme area D:

(a) To increase to the optimum possible extent the yield of major crops, livestock, and aquaculture species, by using the combined resources of modern biotechnology and conventional plant/animal/micro-organism improvement, including the more diverse use of genetic material resources, both hybrid and original. 2/ Forest product yields should similarly be increased, to ensure the sustainable use of forests; 3/

(b) To reduce the need for volume increases of food, feed and raw materials by improving the nutritional value (composition) of the source crops, animals and micro-organisms, and to reduce post-harvest losses of plant and animal products;

(c) To increase the use of integrated pest, disease and crop management techniques to eliminate overdependence on agrochemicals, thereby encouraging environmentally sustainable agricultural practices;

(d) To evaluate the agricultural potential of marginal lands in comparison with other potential uses and to develop, where appropriate, systems allowing for sustainable productivity increases;

(e) To expand the applications of biotechnology in forestry, both for increasing yields and more efficient utilization of forest products and for improving afforestation and reforestation techniques. Efforts should be concentrated on species and products that are grown in and are of value particularly for developing countries;

(f) To increase the efficiency of nitrogen fixation and mineral absorption by the symbiosis of higher plants with micro-organisms;

(g) To improve capabilities in basic and applied sciences and in the management of complex interdisciplinary research projects.

Activities

(a) Management-related activities

16.4. Governments at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions, should improve both plant and animal breeding and micro-organisms through the use of traditional and modern biotechnologies, to enhance sustainable agricultural output to achieve food security, particularly in developing countries, with due regard to the prior identification of desired characteristics before modification, taking into account the needs of farmers, the socio-economic, cultural and environmental impacts of modifications and the need to promote sustainable social and economic development, paying particular attention to how the use of biotechnology will impact on the maintenance of environmental integrity.

16.5. More specifically, these entities should:

(a) Improve productivity, nutritional quality and shelf-life of food and animal feed products, with efforts including work on pre- and post-harvest losses;

(b) Further develop resistance to diseases and pests;

(c) Develop plant cultivars tolerant and/or resistant to stress from factors such as pests and diseases and from abiotic causes;

(d) Promote the use of underutilized crops of possible future importance for human nutrition and industrial supply of raw materials;

(e) Increase the efficiency of symbiotic processes that assist sustainable agricultural production;

(f) Facilitate the conservation and safe exchange of plant, animal and microbial germ plasm by applying risk assessment and management procedures, including improved diagnostic techniques for detection of pests and diseases by better methods of rapid propagation;

(g) Develop improved diagnostic techniques and vaccines for the prevention and spread of diseases and for rapid assessment of toxins or infectious organisms in products for human use or livestock feed;

(h) Identify more productive strains of fast-growing trees, especially for fuel wood, and develop rapid propagation methods to aid their wider dissemination and use;

(i) Evaluate the use of various biotechnology techniques to improve the yields of fish, algal and other aquatic species;

(j) Promote sustainable agricultural output by strengthening and broadening the capacity and scope of existing research centres to achieve the necessary critical mass through encouragement and monitoring of research into the development of biological products and processes of productive and environmental value that are economically and socially feasible, while taking safety considerations into account;

(k) Promote the integration of appropriate and traditional biotechnologies for the purposes of cultivating genetically modified plants, rearing healthy animals and protecting forest genetic resources;

(l) Develop processes to increase the availability of materials derived from biotechnology for use in food, feed and renewable raw materials production.

(b) Data and information

16.6. The following activities should be undertaken:

(a) Consideration of comparative assessments of the potential of the different technologies for food production, together with a system for assessing the possible effects of biotechnologies on international trade in agricultural products;

(b) Examination of the implications of the withdrawal of subsidies and the possible use of other economic instruments to reflect the environmental costs associated with the unsustainable use of agrochemicals;

(c) Maintenance and development of data banks of information on environmental and health impacts of organisms to facilitate risk assessment;

(d) Acceleration of technology acquisition, transfer and adaptation by developing countries to support national activities that promote food security.

(c) International and regional cooperation and coordination

16.7. Governments at the appropriate level, with the support of relevant international and regional organizations, should promote the following activities in conformity with international agreements or arrangements on biological diversity, as appropriate:

(a) Cooperation on issues related to conservation of, access to and exchange of germ plasm; rights associated with intellectual property and

informal innovations, including farmers' and breeders' rights; access to the benefits of biotechnology; and bio-safety;

(b) Promotion of collaborative research programmes, especially in developing countries, to support activities outlined in this programme area, with particular reference to cooperation with local and indigenous people and their communities in the conservation of biological diversity and sustainable use of biological resources, as well as the fostering of traditional methods and knowledge of such groups in connection with these activities;

(c) Acceleration of technology acquisition, transfer and adaptation by developing countries to support national activities that promote food security, through the development of systems for substantial and sustainable productivity increases that do not damage or endanger local ecosystems; 4/

(d) Development of appropriate safety procedures based on programme area D, taking account of ethical considerations.

Means of implementation

(a) Financing and cost evaluation

16.8. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $5 billion, including about $50 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means*

(c) Human resource development

16.9. Training of competent professionals in the basic and applied sciences at all levels (including scientific personnel, technical staff and extension workers) is one of the most essential components of any programme of this kind. Creating awareness of the benefits and risks of biotechnology is essential. Given the importance of good management of research resources for the successful completion of large multidisciplinary projects, continuing programmes of formal training for scientists should include managerial training. Training programmes should also be developed, within the context of specific projects, to meet regional or national needs for comprehensively trained personnel capable of using advanced technology to reduce the "brain drain" from developing to developed countries. Emphasis should be given to

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* See paras. 16.6 and 16.7.

encouraging collaboration between and training of scientists, extension workers and users to produce integrated systems. Additionally, special consideration should be given to the execution of programmes for training and exchange of knowledge on traditional biotechnologies and for training on safety procedures.

(d) Capacity-building

16.10. Institutional upgrading or other appropriate measures will be needed to build up technical, managerial, planning and administrative capacities at the national level to support the activities in this programme area. Such measures should be backed up by international, scientific, technical and financial assistance adequate to facilitate technical cooperation and raise the capacities of the developing countries. Programme area E contains further details.

B. Improving human health

Basis for action

16.11. The improvement of human health is one of the most important objectives of development. The deterioration of environmental quality, notably air, water and soil pollution owing to toxic chemicals, hazardous wastes, radiation and other sources, is a matter of growing concern. This degradation of the environment resulting from inadequate or inappropriate development has a direct negative effect on human health. Malnutrition, poverty, poor human settlements, lack of good-quality potable water and inadequate sanitation facilities add to the problems of communicable and non-communicable diseases. As a consequence, the health and well-being of people are exposed to increasing pressures.

Objectives

16.12. The main objective of this programme area is to contribute, through the environmentally sound application of biotechnology to an overall health programme, to: 5/

(a) Reinforce or inaugurate (as a matter of urgency) programmes to help combat major communicable diseases;

(b) Promote good general health among people of all ages;

(c) Develop and improve programmes to assist in specific treatment of and protection from major non-communicable diseases;

(d) Develop and strengthen appropriate safety procedures based on programme area D, taking account of ethical considerations;

(e) Create enhanced capabilities for carrying out basic and applied research and for managing interdisciplinary research.

Activities

(a) Management-related activities

16.13. Governments at the appropriate level, with the assistance of international and regional organizations, academic and scientific institutions, and the pharmaceutical industry, should, taking into account appropriate safety and ethical considerations:

(a) Develop national and international programmes for identifying and targeting those populations of the world most in need of improvement in general health and protection from diseases;

(b) Develop criteria for evaluating the effectiveness and the benefits and risks of the proposed activities;

(c) Establish and enforce screening, systematic sampling and evaluation procedures for drugs and medical technologies, with a view to barring the use of those that are unsafe for the purposes of experimentation; ensure that drugs and technologies relating to reproductive health are safe and effective and take account of ethical considerations;

(d) Improve, systematically sample and evaluate drinking-water quality by introducing appropriate specific measures, including diagnosis of water-borne pathogens and pollutants;

(e) Develop and make widely available new and improved vaccines against major communicable diseases that are efficient and safe and offer protection with a minimum number of doses, including intensifying efforts directed at the vaccines needed to combat common diseases of children;

(f) Develop biodegradable delivery systems for vaccines that eliminate the need for present multiple-dose schedules, facilitate better coverage of the population and reduce the costs of immunization;

(g) Develop effective biological control agents against disease-transmitting vectors, such as mosquitoes and resistant variants, taking account of environmental protection considerations;

(h) Using the tools provided by modern biotechnology, develop, inter alia, improved diagnostics, new drugs and improved treatments and delivery systems;

(i) Develop the improvement and more effective utilization of medicinal plants and other related sources;

(j) Develop processes to increase the availability of materials derived from biotechnology, for use in improving human health.

(b) Data and information

16.14. The following activities should be undertaken:

(a) Research to assess the comparative social, environmental and financial costs and benefits of different technologies for basic and reproductive health care within a framework of universal safety and ethical considerations;

(b) Development of public education programmes directed at decision makers and the general public to encourage awareness and understanding of the relative benefits and risks of modern biotechnology, according to ethical and cultural considerations.

(c) International and regional cooperation and coordination

16.15. Governments at the appropriate levels, with the support of relevant international and regional organizations, should:

(a) Develop and strengthen appropriate safety procedures based on programme area D, taking account of ethical considerations;

(b) Support the development of national programmes, particularly in developing countries, for improvements in general health, especially protection from major communicable diseases, common diseases of children and disease-transmitting factors.

Means of implementation

16.16. To achieve the above goals, the activities need to be implemented with urgency if progress towards the control of major communicable diseases is to be achieved by the beginning of the next century. The spread of some diseases to all regions of the world calls for global measures. For more localized diseases, regional or national policies will be more appropriate. The achievement of goals calls for:

(a) Continuous international commitment;

(b) National priorities with a defined time-frame;

(c) Scientific and financial input at global and national levels.

(a) Financing and cost evaluation

16.17. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $14 billion, including about $130 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon,

inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

16.18. Well-coordinated multidisciplinary efforts involving cooperation between scientists, financial institutions and industries will be required. At the global level, this may mean collaboration between research institutions in different countries, with funding at the intergovernmental level, possibly supported by similar collaboration at the national level. Research and development support will also need to be strengthened, together with the mechanisms for providing the transfer of relevant technology.

(c) Human resource development

16.19. Training and technology transfer is needed at the global level, with regions and countries having access to, and participation in exchange of, information and expertise, particularly indigenous or traditional knowledge and related biotechnology. It is essential to create or enhance endogenous capabilities in developing countries to enable them to participate actively in the processes of biotechnology production. The training of personnel could be undertaken at three levels:

(a) That of scientists required for basic and product-oriented research;

(b) That of health personnel (to be trained in the safe use of new products) and of science managers required for complex intermultidisciplinary research;

(c) That of tertiary-level technical workers required for delivery in the field.

(d) Capacity-building*

C. Enhancing protection of the environment

Basis for action

16.20. Environmental protection is an integral component of sustainable development. The environment is threatened in all its biotic and abiotic components: animals, plants, microbes and ecosystems comprising biological diversity; water, soil and air, which form the physical components of habitats and ecosystems; and all the interactions between the components of biodiversity and their sustaining habitats and ecosystems. With the continued increase in the use of chemicals, energy and non-renewable resources by an

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* See programme area E.

expanding global population, associated environmental problems will also increase. Despite increasing efforts to prevent waste accumulation and to promote recycling, the amount of environmental damage caused by overconsumption, the quantities of waste generated and the degree of unsustainable land use appear likely to continue growing.

16.21. The need for a diverse genetic pool of plant, animal and microbial germ plasm for sustainable development is well established. Biotechnology is one of many tools that can play an important role in supporting the rehabilitation of degraded ecosystems and landscapes. This may be done through the development of new techniques for reforestation and afforestation, germ plasm conservation, and cultivation of new plant varieties. Biotechnology can also contribute to the study of the effects exerted on the remaining organisms and on other organisms by organisms introduced into ecosystems.

Objectives

16.22. The aim of this programme is to prevent, halt and reverse environmental degradation through the appropriate use of biotechnology in conjunction with other technologies, while supporting safety procedures as an integral component of the programme. Specific objectives include the inauguration as soon as possible of specific programmes with specific targets:

(a) To adopt production processes making optimal use of natural resources, by recycling biomass, recovering energy and minimizing waste generation; 6/

(b) To promote the use of biotechnologies, with emphasis on bio-remediation of land and water, waste treatment, soil conservation, reforestation, afforestation and land rehabilitation; 7/, 8/

(c) To apply biotechnologies and their products to protect environmental integrity with a view to long-term ecological security.

Activities

(a) Management-related activities

16.23. Governments at the appropriate level, with the support of relevant international and regional organizations, the private sector, non-governmental organizations and academic and scientific institutions, should:

(a) Develop environmentally sound alternatives and improvements for environmentally damaging production processes;

(b) Develop applications to minimize the requirement for unsustainable synthetic chemical input and to maximize the use of environmentally appropriate products, including natural products (see programme area A);

(c) Develop processes to reduce waste generation, treat waste before disposal and make use of biodegradable materials;

(d) Develop processes to recover energy and provide renewable energy sources, animal feed and raw materials from recycling organic waste and biomass;

(e) Develop processes to remove pollutants from the environment, including accidental oil spills, where conventional techniques are not available or are expensive, inefficient or inadequate;

(f) Develop processes to increase the availability of planting materials, particularly indigenous varieties, for use in afforestation and reforestation and to improve sustainable yields from forests;

(g) Develop applications to increase the availability of stress-tolerant planting material for land rehabilitation and soil conservation;

(h) Promote the use of integrated pest management based on the judicious use of bio-control agents;

(i) Promote the appropriate use of bio-fertilizers within national fertilizer programmes;

(j) Promote the use of biotechnologies relevant to the conservation and scientific study of biological diversity and the sustainable use of biological resources;

(k) Develop easily applicable technologies for the treatment of sewage and organic waste;

(l) Develop new technologies for rapid screening of organisms for useful biological properties;

(m) Promote new biotechnologies for tapping mineral resources in an environmentally sustainable manner.

(b) Data and information

16.24. Steps should be taken to increase access both to existing information about biotechnology and to facilities based on global databases.

(c) International and regional cooperation and coordination

16.25. Governments at the appropriate level, with the support of relevant international and regional organizations, should:

(a) Strengthen research, training and development capabilities, particularly in developing countries, to support the activities outlined in this programme area;

(b) Develop mechanisms for scaling up and disseminating environmentally sound biotechnologies of high environmental importance, especially in the short term, even though those biotechnologies may have limited commercial potential;

(c) Enhance cooperation, including transfer of biotechnology, between participating countries for capacity-building;

(d) Develop appropriate safety procedures based on programme area D, taking account of ethical considerations.

Means of implementation

(a) Financing and cost evaluation

16.26. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $1 billion, including about $10 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means*

(c) Human resource development

16.27. The activities for this programme area will increase the demand for trained personnel. Support for existing training programmes needs to be increased, for example, at the university and technical institute level, as well as the exchange of trained personnel between countries and regions. New and additional training programmes also need to be developed, for example, for technical and support personnel. There is also an urgent need to improve the level of understanding of biological principles and their policy implications among decision makers in Governments, and financial and other institutions.

(d) Capacity-building

16.28. Relevant institutions will need to have the responsibility for undertaking, and the capacity (political, financial and workforce) to undertake, the above-mentioned activities and to be dynamic in response to new biotechnological developments (see programme area E).

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* See paras. 16.23-16.25 above.

D. Enhancing safety and developing international mechanisms for cooperation

Basis for action

16.29. There is a need for further development of internationally agreed principles on risk assessment and management of all aspects of biotechnology, which should build upon those developed at the national level. Only when adequate and transparent safety and border-control procedures are in place will the community at large be able to derive maximum benefit from, and be in a much better position to accept the potential benefits and risks of, biotechnology. Several fundamental principles could underlie many of these safety procedures, including primary consideration of the organism, building on the principle of familiarity, applied in a flexible framework, taking into account national requirements and recognizing that the logical progression is to start with a step-by-step and case-by-case approach, but also recognizing that experience has shown that in many instances a more comprehensive approach should be used, based on the experiences of the first period, leading, inter alia, to streamlining and categorizing; complementary consideration of risk assessment and risk management; and classification into contained use or release to the environment.

Objectives

16.30. The aim of this programme area is to ensure safety in biotechnology development, application, exchange and transfer through international agreement on principles to be applied on risk assessment and management,* with particular reference to health and environmental considerations, including the widest possible public participation and taking account of ethical considerations.

Activities

16.31. The proposed activities for this programme area call for close international cooperation. They should build upon planned or existing activities to accelerate the environmentally sound application of biotechnology, especially in developing countries.*

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* See research paper No. 55, entited "Environmentally sound management of biotechnology: safety in biotechnology - assessment and management of risk" (February 1992), prepared by the United Nations Conference on Environment and Development secretariat to take account of comments made at the third session of the Preparatory Committee for the United Nations Conference on Environment and Development on part II of document A/CONF.151/PC/67, which incorporated the findings of the ad hoc workshop of Senior-level Experts on Assessing and Managing Biotechnology Risks, held in London in June 1991.

(a) Management-related activities

16.32. Governments at the appropriate level, with the support of relevant international and regional organizations, the private sector, non-governmental organizations and academic and scientific institutions, should:

(a) Make the existing safety procedures widely available by collecting the existing information and adapting it to the specific needs of different countries and regions;

(b) Further develop, as necessary, the existing safety procedures to promote scientific development and categorization in the areas of risk assessment and risk management (information requirements; databases; procedures for assessing risks and conditions of release; establishment of safety conditions; monitoring and inspections, taking account of ongoing national, regional and international initiatives and avoiding duplication wherever possible);

(c) Compile, update and develop compatible safety procedures into a framework of internationally agreed principles as a basis for guidelines to be applied on safety in biotechnology, including consideration of the need for and feasibility of an international agreement, and promote information exchange as a basis for further development, drawing on the work already undertaken by international or other expert bodies;

(d) Undertake training programmes at the national and regional levels on the application of the proposed technical guidelines;

(e) Assist in exchanging information about the procedures required for safe handling and risk management and about the conditions of release of the products of biotechnology, and cooperate in providing immediate assistance in cases of emergencies that may arise in conjunction with the use of biotechnology products.

(b) Data and information*

(c) International and regional cooperation and coordination

16.33. Governments at the appropriate level, with the support of the relevant international and regional organizations, should raise awareness of the relative benefits and risks of biotechnology.

16.34. Further activities should include the following (see also para. 16.32):

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* See paras. 16.32 and 16.33.

(a) Organizing one or more regional meetings between countries to identify further practical steps to facilitate international cooperation in bio-safety;

(b) Establishing an international network incorporating national, regional and global contact points;

(c) Providing direct assistance upon request through the international network, using information networks, databases and information procedures;

(d) Considering the need for and feasibility of internationally agreed guidelines on safety in biotechnology releases, including risk assessment and risk management, and considering studying the feasibility of guidelines which could facilitate national legislation on liability and compensation.

Means of implementation

(a) Financing and cost evaluation

16.35. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programmes to be about $2 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means*

(c) Human resource development*

(d) Capacity-building

16.36. Adequate international technical and financial assistance should be provided and technical cooperation to developing countries facilitated in order to build up technical, managerial, planning and administrative capacities at the national level to support the activities in this programme area (see also programme area E).

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* See para. 16.32.

E. Establishing enabling mechanisms for the development and the environmentally sound application of biotechnology

Basis for action

16.37. The accelerated development and application of biotechnologies, particularly in developing countries, will require a major effort to build up institutional capacities at the national and regional levels. In developing countries, enabling factors such as training capacity, know-how, research and development facilities and funds, industrial building capacity, capital (including venture capital) protection of intellectual property rights, and expertise in areas including marketing research, technology assessment, socio-economic assessment and safety assessment are frequently inadequate. Efforts will therefore need to be made to build up capacities in these and other areas and to match such efforts with appropriate levels of financial support. There is therefore a need to strengthen the endogenous capacities of developing countries by means of new international initiatives to support research in order to speed up the development and application of both new and conventional biotechnologies to serve the needs of sustainable development at the local, national and regional levels. National mechanisms to allow for informed comment by the public with regard to biotechnology research and application should be part of the process.

16.38. Some activities at the national, regional and global levels already address the issues outlined in programme areas A, B, C and D, as well as the provision of advice to individual countries on the development of national guidelines and systems for the implementation of those guidelines. These activities are generally uncoordinated, however, involving many different organizations, priorities, constituencies, time-scales, funding sources and resource constraints. There is a need for a much more cohesive and coordinated approach to harness available resources in the most effective manner. As with most new technologies, research in biotechnology and the application of its findings could have significant positive and negative socio-economic as well as cultural impacts. These impacts should be carefully identified in the earliest phases of the development of biotechnology in order to enable appropriate management of the consequences of transferring biotechnology.

Objectives

16.39. The objectives are as follows:

(a) To promote the development and application of biotechnologies, with special emphasis on developing countries, by:

(i) Enhancing existing efforts at the national, regional and global levels;

(ii) Providing the necessary support for biotechnology, particularly research and product development, at the national, regional and international levels;

(iii) Raising public awareness regarding the relative beneficial aspects of and risks related to biotechnology, to contribute to sustainable development;

(iv) Helping to create a favourable climate for investments, industrial capacity-building and distribution/marketing;

(v) Encouraging the exchange of scientists among all countries and discouraging the "brain drain";

(vi) Recognizing and fostering the traditional methods and knowledge of indigenous peoples and their communities and ensuring the opportunity for their participation in the economic and commercial benefits arising from developments in biotechnology; 9/

(b) To identify ways and means of enhancing current efforts, building wherever possible on existing enabling mechanisms, particularly regional, to determine the precise nature of the needs for additional initiatives, particularly in respect of developing countries, and to develop appropriate response strategies, including proposals for any new international mechanisms;

(c) To establish or adapt appropriate mechanisms for safety appraisal and risk assessment at the local, regional and international levels, as appropriate.

Activities

(a) Management-related activities

16.40. Governments at the appropriate level, with the support of international and regional organizations, the private sector, non-governmental organizations and academic and scientific institutions, should:

(a) Develop policies and mobilize additional resources to facilitate greater access to the new biotechnologies, particularly by and among developing countries;

(b) Implement programmes to create greater awareness of the potential and relative benefits and risks of the environmentally sound application of biotechnology among the public and key decision makers;

(c) Undertake an urgent review of existing enabling mechanisms, programmes and activities at the national, regional and global levels to identify strengths, weaknesses and gaps, and to assess the priority needs of developing countries;

(d) Undertake an urgent follow-up and critical review to identify ways and means of strengthening endogenous capacities within and among developing countries for the environmentally sound application of biotechnology, including, as a first step, ways to improve existing mechanisms, particularly

at the regional level, and, as a subsequent step, the consideration of possible new international mechanisms, such as regional biotechnology centres;

(e) Develop strategic plans for overcoming targeted constraints by means of appropriate research, product development and marketing;

(f) Establish additional quality-assurance standards for biotechnology applications and products, where necessary.

(b) Data and information

16.41. The following activities should be undertaken: facilitation of access to existing information dissemination systems, especially among developing countries; improvement of such access where appropriate; and consideration of the development of a directory of information.

(c) International and regional cooperation and coordination

16.42. Governments at the appropriate level, with the assistance of international and regional organizations, should develop appropriate new initiatives to identify priority areas for research based on specific problems and facilitate access to new biotechnologies, particularly by and among developing countries, among relevant undertakings within those countries, in order to strengthen endogenous capacities and to support the building of research and institutional capacity in those countries.

Means of implementation

(a) Financing and cost evaluation

16.43. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $5 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

16.44. Workshops, symposia, seminars and other exchanges among the scientific community at the regional and global levels, on specific priority themes, will need to be organized, making full use of the existing scientific and technological manpower in each country for bringing about such exchanges.

(c) Human resource development

16.45. Personnel development needs will need to be identified and additional training programmes developed at the national, regional and global levels, especially in developing countries. These should be supported by increased

training at all levels, graduate, postgraduate and post-doctoral, as well as by the training of technicians and support staff, with particular reference to the generation of trained manpower in consultant services, design, engineering and marketing research. Training programmes for lecturers training scientists and technologists in advanced research institutions in different countries throughout the world will also need to be developed, and systems giving appropriate rewards, incentives and recognition to scientists and technologists will need to be instituted (see para. 16.44). Conditions of service will also need to be improved at the national level in developing countries to encourage and nurture trained manpower with a view to retaining that manpower locally. Society should be informed of the social and cultural impact of the development and application of biotechnology.

(d) Capacity-building

16.46. Biotechnology research and development is undertaken both under highly sophisticated conditions and at the practical level in many countries. Efforts will be needed to ensure that the necessary infrastructure facilities for research, extension and technology activities are available on a decentralized basis. Global and regional collaboration for basic and applied research and development will also need to be further enhanced and every effort should be made to ensure that existing national and regional facilities are fully utilized. Such institutions already exist in some countries and it should be possible to make use of them for training purposes and joint research projects. Strengthening of universities, technical schools and local research institutions for the development of biotechnologies and extension services for their application will need to be developed, especially in developing countries.

Notes

1/ See chapter 15 (Conservation of biological diversity).

2/ See chapter 14 (Promoting sustainable agriculture and rural development).

3/ See chapter 11 (Combating deforestation).

4/ See chapter 34 (Transfer of environmentally sound technology, cooperation and capacity-building).

5/ See chapter 6 (Protecting and promoting human health conditions).

6/ See chapter 21 (Environmentally sound management of solid wastes and sewage-related issues).

7/ See chapter 10 (Integrated approach to the planning and management of land resources).

Notes (continued)

8/ See chapter 18 (Protection of the quality and supply of freshwater resources: application of integrated approaches to the development, management and use of water resources).

9/ See chapter 26 (Recognizing and strengthening the role of indigenous people and their communities).

Chapter 17

PROTECTION OF THE OCEANS, ALL KINDS OF SEAS, INCLUDING ENCLOSED AND SEMI-ENCLOSED SEAS, AND COASTAL AREAS AND THE PROTECTION, RATIONAL USE AND DEVELOPMENT OF THEIR LIVING RESOURCES

INTRODUCTION

17.1. The marine environment - including the oceans and all seas and adjacent coastal areas - forms an integrated whole that is an essential component of the global life-support system and a positive asset that presents opportunities for sustainable development. International law, as reflected in the provisions of the United Nations Convention on the Law of the Sea 1/, 2/ referred to in this chapter of Agenda 21, sets forth rights and obligations of States and provides the international basis upon which to pursue the protection and sustainable development of the marine and coastal environment and its resources. This requires new approaches to marine and coastal area management and development at the national, subregional, regional and global levels, approaches that are integrated in content and are precautionary and anticipatory in ambit, as reflected in the following programme areas: 3/

(a) Integrated management and sustainable development of coastal areas, including exclusive economic zones;

(b) Marine environmental protection;

(c) Sustainable use and conservation of marine living resources of the high seas;

(d) Sustainable use and conservation of marine living resources under national jurisdiction;

(e) Addressing critical uncertainties for the management of the marine environment and climate change;

(f) Strengthening international, including regional, cooperation and coordination;

(g) Sustainable development of small islands.

17.2. The implementation by developing countries of the activities set forth below shall be commensurate with their individual technological and financial capacities and priorities in allocating resources for development needs and ultimately depends on the technology transfer and financial resources required and made available to them.

A. Integrated management and sustainable development of coastal and marine areas, including exclusive economic zones

Basis for action

17.3. The coastal area contains diverse and productive habitats important for human settlements, development and local subsistence. More than half the world's population lives within 60 km of the shoreline, and this could rise to three quarters by the year 2020. Many of the world's poor are crowded in coastal areas. Coastal resources are vital for many local communities and indigenous people. The exclusive economic zone (EEZ) is also an important marine area where the States manage the development and conservation of natural resources for the benefit of their people. For small island States or countries, these are the areas most available for development activities.

17.4. Despite national, subregional, regional and global efforts, current approaches to the management of marine and coastal resources have not always proved capable of achieving sustainable development, and coastal resources and the coastal environment are being rapidly degraded and eroded in many parts of the world.

Objectives

17.5. Coastal States commit themselves to integrated management and sustainable development of coastal areas and the marine environment under their national jurisdiction. To this end, it is necessary to, inter alia:

(a) Provide for an integrated policy and decision-making process, including all involved sectors, to promote compatibility and a balance of uses;

(b) Identify existing and projected uses of coastal areas and their interactions;

(c) Concentrate on well-defined issues concerning coastal management;

(d) Apply preventive and precautionary approaches in project planning and implementation, including prior assessment and systematic observation of the impacts of major projects;

(e) Promote the development and application of methods, such as national resource and environmental accounting, that reflect changes in value resulting from uses of coastal and marine areas, including pollution, marine erosion, loss of resources and habitat destruction;

(f) Provide access, as far as possible, for concerned individuals, groups and organizations to relevant information and opportunities for consultation and participation in planning and decision-making at appropriate levels.

Activities

(a) Management-related activities

17.6. Each coastal State should consider establishing, or where necessary strengthening, appropriate coordinating mechanisms (such as a high-level policy planning body) for integrated management and sustainable development of coastal and marine areas and their resources, at both the local and national levels. Such mechanisms should include consultation, as appropriate, with the academic and private sectors, non-governmental organizations, local communities, resource user groups, and indigenous people. Such national coordinating mechanisms could provide, inter alia, for:

(a) Preparation and implementation of land and water use and siting policies;

(b) Implementation of integrated coastal and marine management and sustainable development plans and programmes at appropriate levels;

(c) Preparation of coastal profiles identifying critical areas, including eroded zones, physical processes, development patterns, user conflicts and specific priorities for management;

(d) Prior environmental impact assessment, systematic observation and follow-up of major projects, including the systematic incorporation of results in decision-making;

(e) Contingency plans for human induced and natural disasters, including likely effects of potential climate change and sealevel rise, as well as contingency plans for degradation and pollution of anthropogenic origin, including spills of oil and other materials;

(f) Improvement of coastal human settlements, especially in housing, drinking water and treatment and disposal of sewage, solid wastes and industrial effluents;

(g) Periodic assessment of the impacts of external factors and phenomena to ensure that the objectives of integrated management and sustainable development of coastal areas and the marine environment are met;

(h) Conservation and restoration of altered critical habitats;

(i) Integration of sectoral programmes on sustainable development for settlements, agriculture, tourism, fishing, ports and industries affecting the coastal area;

(j) Infrastructure adaptation and alternative employment;

(k) Human resource development and training;

(l) Public education, awareness and information programmes;

(m) Promoting environmentally sound technology and sustainable practices;

(n) Development and simultaneous implementation of environmental quality criteria.

17.7. Coastal States, with the support of international organizations, upon request, should undertake measures to maintain biological diversity and productivity of marine species and habitats under national jurisdiction. Inter alia, these measures might include: surveys of marine biodiversity, inventories of endangered species and critical coastal and marine habitats; establishment and management of protected areas; and support of scientific research and dissemination of its results.

(b) Data and information

17.8. Coastal States, where necessary, should improve their capacity to collect, analyse, assess and use information for sustainable use of resources, including environmental impacts of activities affecting the coastal and marine areas. Information for management purposes should receive priority support in view of the intensity and magnitude of the changes occurring in the coastal and marine areas. To this end, it is necessary to, inter alia:

(a) Develop and maintain databases for assessment and management of coastal areas and all seas and their resources;

(b) Develop socio-economic and environmental indicators;

(c) Conduct regular environmental assessment of the state of the environment of coastal and marine areas;

(d) Prepare and maintain profiles of coastal area resources, activities, uses, habitats and protected areas based on the criteria of sustainable development;

(e) Exchange information and data.

17.9. Cooperation with developing countries, and, where applicable, subregional and regional mechanisms, should be strengthened to improve their capacities to achieve the above.

(c) International and regional cooperation and coordination

17.10. The role of international cooperation and coordination on a bilateral basis and, where applicable, within a subregional, interregional, regional or global framework, is to support and supplement national efforts of coastal States to promote integrated management and sustainable development of coastal and marine areas.

17.11. States should cooperate, as appropriate, in the preparation of national guidelines for integrated coastal zone management and development, drawing on existing experience. A global conference to exchange experience in the field could be held before 1994.

Means of implementation

(a) Financing and cost evaluation

17.12. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $6 billion, including about $50 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

17.13. States should cooperate in the development of necessary coastal systematic observation, research and information management systems. They should provide access to and transfer environmentally safe technologies and methodologies for sustainable development of coastal and marine areas to developing countries. They should also develop technologies and endogenous scientific and technological capacities.

17.14. International organizations, whether subregional, regional or global, as appropriate, should support coastal States, upon request, in these efforts, as indicated above, devoting special attention to developing countries.

(c) Human resource development

17.15. Coastal States should promote and facilitate the organization of education and training in integrated coastal and marine management and sustainable development for scientists, technologists, managers (including community-based managers) and users, leaders, indigenous peoples, fisherfolk, women and youth, among others. Management and development, as well as environmental protection concerns and local planning issues, should be incorporated in educational curricula and public awareness campaigns, with due regard to traditional ecological knowledge and socio-cultural values.

17.16. International organizations, whether subregional, regional or global, as appropriate, should support coastal States, upon request, in the areas indicated above, devoting special attention to developing countries.

(d) Capacity-building

17.17. Full cooperation should be extended, upon request, to coastal States in their capacity-building efforts and, where appropriate, capacity-building should be included in bilateral and multilateral development cooperation. Coastal States may consider, inter alia:

(a) Ensuring capacity-building at the local level;

(b) Consulting on coastal and marine issues with local administrations, the business community, the academic sector, resource user groups and the general public;

(c) Coordinating sectoral programmes while building capacity;

(d) Identifying existing and potential capabilities, facilities and needs for human resource development and scientific and technological infrastructure;

(e) Developing scientific and technological means and research;

(f) Promoting and facilitating human resource development and education;

(g) Supporting "centres of excellence" in integrated coastal and marine resource management;

(h) Supporting pilot demonstration programmes and projects in integrated coastal and marine management.

B. Marine environmental protection

Basis for action

17.18. Degradation of the marine environment can result from a wide range of sources. Land-based sources contribute 70 per cent of marine pollution, while maritime transport and dumping-at-sea activities contribute 10 per cent each. The contaminants that pose the greatest threat to the marine environment are, in variable order of importance and depending on differing national or regional situations, sewage, nutrients, synthetic organic compounds, sediments, litter and plastics, metals, radionuclides, oil/hydrocarbons and polycyclic aromatic hydrocarbons (PAHs). Many of the polluting substances originating from land-based sources are of particular concern to the marine environment since they exhibit at the same time toxicity, persistence and bioaccumulation in the food chain. There is currently no global scheme to address marine pollution from land-based sources.

17.19. Degradation of the marine environment can also result from a wide range of activities on land. Human settlements, land use, construction of coastal infrastructure, agriculture, forestry, urban development, tourism and industry can affect the marine environment. Coastal erosion and siltation are of particular concern.

17.20. Marine pollution is also caused by shipping and sea-based activities. Approximately 600,000 tons of oil enter the oceans each year as a result of normal shipping operations, accidents and illegal discharges. With respect to offshore oil and gas activities, currently machinery space discharges are regulated internationally and six regional conventions to control platform discharges have been under consideration. The nature and extent of environmental impacts from offshore oil exploration and production activities generally account for a very small proportion of marine pollution.

17.21. A precautionary and anticipatory rather than a reactive approach is necessary to prevent the degradation of the marine environment. This requires, inter alia, the adoption of precautionary measures, environmental impact assessments, clean production techniques, recycling, waste audits and minimization, construction and/or improvement of sewage treatment facilities, quality management criteria for the proper handling of hazardous substances, and a comprehensive approach to damaging impacts from air, land and water. Any management framework must include the improvement of coastal human settlements and the integrated management and development of coastal areas.

Objectives

17.22. States, in accordance with the provisions of the United Nations Convention on the Law of the Sea on protection and preservation of the marine environment, commit themselves, in accordance with their policies, priorities and resources, to prevent, reduce and control degradation of the marine environment so as to maintain and improve its life-support and productive capacities. To this end, it is necessary to:

(a) Apply preventive, precautionary and anticipatory approaches so as to avoid degradation of the marine environment, as well as to reduce the risk of long-term or irreversible adverse effects upon it;

(b) Ensure prior assessment of activities that may have significant adverse impacts upon the marine environment;

(c) Integrate protection of the marine environment into relevant general environmental, social and economic development policies;

(d) Develop economic incentives, where appropriate, to apply clean technologies and other means consistent with the internalization of environmental costs, such as the polluter pays principle, so as to avoid degradation of the marine environment;

(e) Improve the living standards of coastal populations, particularly in developing countries, so as to contribute to reducing the degradation of the coastal and marine environment.

17.23. States agree that provision of additional financial resources, through appropriate international mechanisms, as well as access to cleaner technologies and relevant research, would be necessary to support action by developing countries to implement this commitment.

Activities

(a) Management-related activities

Prevention, reduction and control of degradation of the marine environment from land-based activities

17.24. In carrying out their commitment to deal with degradation of the marine environment from land-based activities, States should take action at the national level and, where appropriate, at the regional and subregional levels, in concert with action to implement programme area A, and should take account of the Montreal Guidelines for the Protection of the Marine Environment from Land-Based Sources.

17.25. To this end, States, with the support of the relevant international environmental, scientific, technical and financial organizations, should cooperate, inter alia, to:

(a) Consider updating, strengthening and extending the Montreal Guidelines, as appropriate;

(b) Assess the effectiveness of existing regional agreements and action plans, where appropriate, with a view to identifying means of strengthening action, where necessary, to prevent, reduce and control marine degradation caused by land-based activities;

(c) Initiate and promote the development of new regional agreements, where appropriate;

(d) Develop means of providing guidance on technologies to deal with the major types of pollution of the marine environment from land-based sources, according to the best scientific evidence;

(e) Develop policy guidance for relevant global funding mechanisms;

(f) Identify additional steps requiring international cooperation.

17.26. The UNEP Governing Council is invited to convene, as soon as practicable, an intergovernmental meeting on protection of the marine environment from land-based activities.

17.27. As concerns sewage, priority actions to be considered by States may include:

(a) Incorporating sewage concerns when formulating or reviewing coastal development plans, including human settlement plans;

(b) Building and maintaining sewage treatment facilities in accordance with national policies and capacities and international cooperation available;

(c) Locating coastal outfalls so as to maintain an acceptable level of environmental quality and to avoid exposing shell fisheries, water intakes and bathing areas to pathogens;

(d) Promoting environmentally sound co-treatments of domestic and compatible industrial effluents, with the introduction, where practicable, of controls on the entry of effluents that are not compatible with the system;

(e) Promoting primary treatment of municipal sewage discharged to rivers, estuaries and the sea, or other solutions appropriate to specific sites;

(f) Establishing and improving local, national, subregional and regional, as necessary, regulatory and monitoring programmes to control effluent discharge, using minimum sewage effluent guidelines and water quality criteria and giving due consideration to the characteristics of receiving bodies and the volume and type of pollutants.

17.28. As concerns other sources of pollution, priority actions to be considered by States may include:

(a) Establishing or improving, as necessary, regulatory and monitoring programmes to control effluent discharges and emissions, including the development and application of control and recycling technologies;

(b) Promoting risk and environmental impact assessments to help ensure an acceptable level of environmental quality;

(c) Promoting assessment and cooperation at the regional level, where appropriate, with respect to the input of point source pollutants from new installations;

(d) Eliminating the emission or discharge of organohalogen compounds that threaten to accumulate to dangerous levels in the marine environment;

(e) Reducing the emission or discharge of other synthetic organic compounds that threaten to accumulate to dangerous levels in the marine environment;

(f) Promoting controls over anthropogenic inputs of nitrogen and phosphorus that enter coastal waters where such problems as eutrophication threaten the marine environment or its resources;

(g) Cooperating with developing countries, through financial and technological support, to maximize the best practicable control and reduction of substances and wastes that are toxic, persistent or liable to bio-accumulate and to establish environmentally sound land-based waste disposal alternatives to sea dumping;

(h) Cooperating in the development and implementation of environmentally sound land-use techniques and practices to reduce run-off to water-courses and estuaries which would cause pollution or degradation of the marine environment;

(i) Promoting the use of environmentally less harmful pesticides and fertilizers and alternative methods for pest control, and considering the prohibition of those found to be environmentally unsound;

(j) Adopting new initiatives at national, subregional and regional levels for controlling the input of non-point source pollutants, which require broad changes in sewage and waste management, agricultural practices, mining, construction and transportation.

17.29. As concerns physical destruction of coastal and marine areas causing degradation of the marine environment, priority actions should include control and prevention of coastal erosion and siltation due to anthropogenic factors related to, inter alia, land-use and construction techniques and practices. Watershed management practices should be promoted so as to prevent, control and reduce degradation of the marine environment.

Prevention, reduction and control of degradation of the marine environment from sea-based activities

17.30. States, acting individually, bilaterally, regionally or multilaterally and within the framework of IMO and other relevant international organizations, whether subregional, regional or global, as appropriate, should assess the need for additional measures to address degradation of the marine environment:

(a) From shipping, by:

(i) Supporting wider ratification and implementation of relevant shipping conventions and protocols;

(ii) Facilitating the processes in (i), providing support to individual States upon request to help them overcome the obstacles identified by them;

(iii) Cooperating in monitoring marine pollution from ships, especially from illegal discharges (e.g., aerial surveillance), and enforcing MARPOL discharge, provisions more rigorously;

(iv) Assessing the state of pollution caused by ships in particularly sensitive areas identified by IMO and taking action to implement applicable measures, where necessary, within such areas to ensure compliance with generally accepted international regulations;

(v) Taking action to ensure respect of areas designated by coastal States, within their exclusive economic zones, consistent with international law, in order to protect and preserve rare or fragile ecosystems, such as coral reefs and mangroves;

(vi) Considering the adoption of appropriate rules on ballast water discharge to prevent the spread of non-indigenous organisms;

(vii) Promoting navigational safety by adequate charting of coasts and ship-routing, as appropriate;

(viii) Assessing the need for stricter international regulations to further reduce the risk of accidents and pollution from cargo ships (including bulk carriers);

(ix) Encouraging IMO and IAEA to work together to complete consideration of a code on the carriage of irradiated nuclear fuel in flasks on board ships;

(x) Revising and updating the IMO Code of Safety for Nuclear Merchant Ships and considering how best to implement a revised code;

(xi) Supporting the ongoing activity within IMO regarding development of appropriate measures for reducing air pollution from ships;

(xii) Supporting the ongoing activity within IMO regarding the development of an international regime governing the transportation of hazardous and noxious substances carried by ships and further considering whether the compensation funds similar to the ones established under the Fund Convention would be appropriate in respect of pollution damage caused by substances other than oil;

(b) From dumping, by:

(i) Supporting wider ratification, implementation and participation in relevant Conventions on dumping at sea, including early conclusion of a future strategy for the London Dumping Convention;

(ii) Encouraging the London Dumping Convention parties to take appropriate steps to stop ocean dumping and incineration of hazardous substances;

(c) From offshore oil and gas platforms, by assessing existing regulatory measures to address discharges, emissions and safety and assessing the need for additional measures;

(d) From ports, by facilitating establishment of port reception facilities for the collection of oily and chemical residues and garbage from ships, especially in MARPOL special areas, and promoting the establishment of smaller scale facilities in marinas and fishing harbours.

17.31. IMO and as appropriate, other competent United Nations organizations, when requested by the States concerned, should assess, where appropriate, the state of marine pollution in areas of congested shipping, such as heavily used international straits, with a view to ensuring compliance with generally accepted international regulations, particularly those related to illegal discharges from ships, in accordance with the provisions of Part III of the United Nations Convention on the Law of the Sea.

17.32. States should take measures to reduce water pollution caused by organotin compounds used in anti-fouling paints.

17.33. States should consider ratifying the Convention on Oil Pollution Preparedness, Response and Cooperation, which addresses, inter alia, the development of contingency plans on the national and international level, as appropriate, including provision of oil-spill response material and training of personnel, including its possible extension to chemical spill response.

17.34. States should intensify international cooperation to strengthen or establish, where necessary, regional oil/chemical-spill response centres and/or, as appropriate, mechanisms in cooperation with relevant subregional, regional or global intergovernmental organizations and, where appropriate, industry-based organizations.

(b) Data and information

17.35. States should, as appropriate, and in accordance with the means at their disposal and with due regard for their technical and scientific capacity and resources, make systematic observations on the state of the marine environment. To this end, States should, as appropriate, consider:

(a) Establishing systematic observation systems to measure marine environmental quality, including causes and effects of marine degradation, as a basis for management;

(b) Regularly exchanging information on marine degradation caused by land-based and sea-based activities and on actions to prevent, control and reduce such degradation;

(c) Supporting and expanding international programmes for systematic observations such as the mussel watch programme, building on existing facilities with special attention to developing countries;

(d) Establishing a clearing-house on marine pollution control information, including processes and technologies to address marine pollution control and to support their transfer to developing countries and other countries with demonstrated needs;

(e) Establishing a global profile and database providing information on the sources, types, amounts and effects of pollutants reaching the marine environment from land-based activities in coastal areas and sea-based sources;

(f) Allocating adequate funding for capacity-building and training programmes to ensure the full participation of developing countries, in particular, in any international scheme under the organs and organizations of the United Nations system for the collection, analysis and use of data and information.

Means of implementation

(a) Financing and cost evaluation

17.36. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $200 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

17.37. National, subregional and regional action programmes will, where appropriate, require technology transfer, in conformity with chapter 34, and financial resources, particularly where developing countries are concerned, including:

(a) Assistance to industries in identifying and adopting clean production or cost-effective pollution control technologies;

(b) Planning development and application of low-cost and low-maintenance sewage installation and treatment technologies for developing countries;

(c) Equipment of laboratories to observe systematically human and other impacts on the marine environment;

(d) Identification of appropriate oil- and chemical-spill control materials, including low-cost locally available materials and techniques, suitable for pollution emergencies in developing countries;

(e) Study of the use of persistent organohalogens that are liable to accumulate in the marine environment to identify those that cannot be adequately controlled and to provide a basis for a decision on a time schedule for phasing them out as soon as practicable;

(f) Establishment of a clearing-house for information on marine pollution control, including processes and technologies to address marine pollution control, and support for their transfer to developing and other countries with demonstrated needs.

(c) Human resource development

17.38. States individually or in cooperation with each other and with the support of international organizations, whether subregional, regional or global, as appropriate, should:

(a) Provide training for critical personnel required for the adequate protection of the marine environment as identified by training needs' surveys at the national, regional or subregional levels;

(b) Promote the introduction of marine environmental protection topics into the curriculum of marine studies programmes;

(c) Establish training courses for oil- and chemical-spill response personnel, in cooperation, where appropriate, with the oil and chemical industries;

(d) Conduct workshops on environmental aspects of port operations and development;

(e) Strengthen and provide secure financing for new and existing specialized international centres of professional maritime education;

(f) States should, through bilateral and multilateral cooperation, support and supplement the national efforts of developing countries as regards human resource development in relation to prevention and reduction of degradation of the marine environment.

(d) Capacity-building

17.39. National planning and coordinating bodies should be given the capacity and authority to review all land-based activities and sources of pollution for their impacts on the marine environment and to propose appropriate control measures.

17.40. Research facilities should be strengthened or, where appropriate, developed in developing countries for systematic observation of marine pollution, environmental impact assessment and development of control recommendations and should be managed and staffed by local experts.

17.41. Special arrangements will be needed to provide adequate financial and technical resources to assist developing countries in preventing and solving problems associated with activities that threaten the marine environment.

17.42. An international funding mechanism should be created for the application of appropriate sewage treatment technologies and building sewage treatment facilities, including grants or concessional loans from international agencies and appropriate regional funds, replenished at least in part on a revolving basis by user fees.

17.43. In carrying out these programme activities, particular attention needs to be given to the problems of developing countries that would bear an unequal burden because of their lack of facilities, expertise or technical capacities.

C. Sustainable use and conservation of marine living resources of the high seas

Basis for action

17.44. Over the last decade, fisheries on the high seas have considerably expanded and currently represent approximately 5 per cent of total world landings. The provisions of the United Nations Convention on the Law of the Sea on the marine living resources of the high seas sets forth rights and obligations of States with respect to conservation and utilization of those resources.

17.45. However, management of high seas fisheries, including the adoption, monitoring and enforcement of effective conservation measures, is inadequate in many areas and some resources are overutilized. There are problems of unregulated fishing, overcapitalization, excessive fleet size, vessel reflagging to escape controls, insufficiently selective gear, unreliable databases and lack of sufficient cooperation between States. Action by States whose nationals and vessels fish on the high seas, as well as cooperation at the bilateral, subregional, regional and global levels, is essential particularly for highly migratory species and straddling stocks. Such action and cooperation should address inadequacies in fishing practices, as well as in biological knowledge, fisheries statistics and improvement of systems for handling data. Emphasis should also be on multi-species management and other approaches that take into account the relationships among species, especially in addressing depleted species, but also in identifying the potential of underutilized or unutilized populations.

Objectives

17.46. States commit themselves to the conservation and sustainable use of marine living resources on the high seas. To this end, it is necessary to:

(a) Develop and increase the potential of marine living resources to meet human nutritional needs, as well as social, economic and development goals;

(b) Maintain or restore populations of marine species at levels that can produce the maximum sustainable yield as qualified by relevant environmental and economic factors, taking into consideration relationships among species;

(c) Promote the development and use of selective fishing gear and practices that minimize waste in the catch of target species and minimize by-catch of non-target species;

(d) Ensure effective monitoring and enforcement with respect to fishing activities;

(e) Protect and restore endangered marine species;

(f) Preserve habitats and other ecologically sensitive areas;

(g) Promote scientific research with respect to the marine living resources in the high seas.

17.47. Nothing in paragraph 17.46 above restricts the right of a State or the competence of an international organization, as appropriate, to prohibit, limit or regulate the exploitation of marine mammals on the high seas more strictly than provided for in that paragraph. States shall cooperate with a view to the conservation of marine mammals and, in the case of cetaceans, shall in particular work through the appropriate international organizations for their conservation, management and study.

17.48. The ability of developing countries to fulfil the above objectives is dependent upon their capabilities, including the financial, scientific and technological means at their disposal. Adequate financial, scientific and technological cooperation should be provided to support action by them to implement these objectives.

Activities

(a) Management-related activities

17.49. States should take effective action, including bilateral and multilateral cooperation, where appropriate at the subregional, regional and global levels, to ensure that high seas fisheries are managed in accordance with the provisions of the United Nations Convention on the Law of the Sea. In particular, they should:

(a) Give full effect to these provisions with regard to fisheries populations whose ranges lie both within and beyond exclusive economic zones (straddling stocks);

(b) Give full effect to these provisions with regard to highly migratory species;

(c) Negotiate, where appropriate, international agreements for the effective management and conservation of fishery stocks;

(d) Define and identify appropriate management units.

17.50. States should convene, as soon as possible, an intergovernmental conference under United Nations auspices, taking into account relevant activities at the subregional, regional and global levels, with a view to promoting effective implementation of the provisions of the United Nations

Convention on the Law of the Sea on straddling fish stocks and highly migratory fish stocks. The conference, drawing, inter alia, on scientific and technical studies by FAO, should identify and assess existing problems related to the conservation and management of such fish stocks, and consider means of improving cooperation on fisheries among States, and formulate appropriate recommendations. The work and the results of the conference should be fully consistent with the provisions of the United Nations Convention on the Law of the Sea, in particular the rights and obligations of coastal States and States fishing on the high seas.

17.51. States should ensure that fishing activities by vessels flying their flags on the high seas take place in such a manner as to minimize incidental catch.

17.52. States should take effective action consistent with international law to monitor and control fishing activities by vessels flying their flags on the high seas to ensure compliance with applicable conservation and management rules, including full, detailed, accurate and timely reporting of catches and effort.

17.53. States should take effective action, consistent with international law, to deter reflagging of vessels by their nationals as a means of avoiding compliance with applicable conservation and management rules for fishing activities on the high seas.

17.54. States should prohibit dynamiting, poisoning and other comparable destructive fishing practices.

17.55. States should fully implement General Assembly resolution 46/215 on large-scale pelagic drift-net fishing.

17.56. States should take measures to increase the availability of marine living resources as human food by reducing wastage, post-harvest losses and discards, and improving techniques of processing, distribution and transportation.

(b) Data and information

17.57. States, with the support of international organizations, whether subregional, regional or global, as appropriate, should cooperate to:

(a) Promote enhanced collection of data necessary for the conservation and sustainable use of the marine living resources of the high seas;

(b) Exchange on a regular basis up-to-date data and information adequate for fisheries assessment;

(c) Develop and share analytical and predictive tools, such as stock assessment and bioeconomic models;

(d) Establish or expand appropriate monitoring and assessment programmes.

(c) International and regional cooperation and coordination

17.58. States, through bilateral and multilateral cooperation and within the framework of subregional and regional fisheries bodies, as appropriate, and with the support of other international intergovernmental agencies, should assess high seas resource potentials and develop profiles of all stocks (target and non-target).

17.59. States should, where and as appropriate, ensure adequate levels of coordination and cooperation in enclosed and semi-enclosed seas and between subregional, regional and global intergovernmental fisheries bodies.

17.60. Effective cooperation within existing subregional, regional or global fisheries bodies should be encouraged. Where such organizations do not exist, States should, as appropriate, cooperate to establish such organizations.

17.61. States with an interest in a high seas fishery regulated by an existing subregional and/or regional high seas fisheries organization of which they are not members should be encouraged to join that organization, where appropriate.

17.62. States recognize:

(a) The responsibility of the International Whaling Commission for the conservation and management of whale stocks and the regulation of whaling pursuant to the 1946 International Convention for the Regulation of Whaling;

(b) The work of the International Whaling Commission Scientific Committee in carrying out studies of large whales in particular, as well as of other cetaceans;

(c) The work of other organizations, such as the Inter-American Tropical Tuna Commission and the Agreement on Small Cetaceans in the Baltic and North Sea under the Bonn Convention, in the conservation, management and study of cetaceans and other marine mammals.

17.63. States should cooperate for the conservation, management and study of cetaceans.

Means of implementation

(a) Financing and cost evaluation

17.64. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $12 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

17.65. States, with the support of relevant international organizations, where necessary, should develop collaborative technical and research programmes to improve understanding of the life cycles and migrations of species found on the high seas, including identifying critical areas and life stages.

17.66. States, with the support of relevant international organizations, whether subregional, regional or global, as appropriate, should:

(a) Develop databases on the high seas marine living resources and fisheries;

(b) Collect and correlate marine environmental data with high seas marine living resources data, including the impacts of regional and global changes brought about by natural causes and by human activities;

(c) Cooperate in coordinating research programmes to provide the knowledge necessary to manage high seas resources.

(c) Human resource development

17.67. Human resource development at the national level should be targeted at both development and management of high seas resources, including training in high seas fishing techniques and in high seas resource assessment, strengthening cadres of personnel to deal with high seas resource management and conservation and related environmental issues, and training observers and inspectors to be placed on fishing vessels.

(d) Capacity-building

17.68. States, with the support, where appropriate, of relevant international organizations, whether subregional, regional or global, should cooperate to develop or upgrade systems and institutional structures for monitoring, control and surveillance, as well as the research capacity for assessment of marine living resource populations.

17.69. Special support, including cooperation among States, will be needed to enhance the capacities of developing countries in the areas of data and information, scientific and technological means, and human resource development in order to participate effectively in the conservation and sustainable utilization of high seas marine living resources.

D. Sustainable use and conservation of marine living resources under national jurisdiction

Basis for action

17.70. Marine fisheries yield 80 to 90 million tons of fish and shellfish per year, 95 per cent of which is taken from waters under national jurisdiction. Yields have increased nearly fivefold over the past four decades. The provisions of the United Nations Convention on the Law of the Sea on marine living resources of the exclusive economic zone and other areas under national jurisdiction set forth rights and obligations of States with respect to conservation and utilization of those resources.

17.71. Marine living resources provide an important source of protein in many countries and their use is often of major importance to local communities and indigenous people. Such resources provide food and livelihoods to millions of people and, if sustainably utilized, offer increased potential to meet nutritional and social needs, particularly in developing countries. To realize this potential requires improved knowledge and identification of marine living resource stocks, particularly of underutilized and unutilized stocks and species, use of new technologies, better handling and processing facilities to avoid wastage, and improved quality and training of skilled personnel to manage and conserve effectively the marine living resources of the exclusive economic zone and other areas under national jurisdiction. Emphasis should also be on multi-species management and other approaches that take into account the relationships among species.

17.72. Fisheries in many areas under national jurisdiction face mounting problems, including local overfishing, unauthorized incursions by foreign fleets, ecosystem degradation, overcapitalization and excessive fleet sizes, underevaluation of catch, insufficiently selective gear, unreliable databases, and increasing competition between artisanal and large-scale fishing, and between fishing and other types of activities.

17.73. Problems extend beyond fisheries. Coral reefs and other marine and coastal habitats, such as mangroves and estuaries, are among the most highly diverse, integrated and productive of the Earth's ecosystems. They often serve important ecological functions, provide coastal protection, and are critical resources for food, energy, tourism and economic development. In many parts of the world, such marine and coastal systems are under stress or are threatened from a variety of sources, both human and natural.

Objectives

17.74. Coastal States, particularly developing countries and States whose economies are overwhelmingly dependent on the exploitation of the marine living resources of their exclusive economic zones, should obtain the full social and economic benefits from sustainable utilization of marine living resources within their exclusive economic zones and other areas under national jurisdiction.

17.75. States commit themselves to the conservation and sustainable use of marine living resources under national jurisdiction. To this end, it is necessary to:

(a) Develop and increase the potential of marine living resources to meet human nutritional needs, as well as social, economic and development goals;

(b) Take into account traditional knowledge and interests of local communities, small-scale artisanal fisheries and indigenous people in development and management programmes;

(c) Maintain or restore populations of marine species at levels that can produce the maximum sustainable yield as qualified by relevant environmental and economic factors, taking into consideration relationships among species;

(d) Promote the development and use of selective fishing gear and practices that minimize waste in the catch of target species and minimize by-catch of non-target species;

(e) Protect and restore endangered marine species;

(f) Preserve rare or fragile ecosystems, as well as habitats and other ecologically sensitive areas.

17.76. Nothing in paragraph 17.75 above restricts the right of a coastal State or the competence of an international organization, as appropriate, to prohibit, limit or regulate the exploitation of marine mammals more strictly than provided for in that paragraph. States shall cooperate with a view to the conservation of marine mammals and in the case of cetaceans shall in particular work through the appropriate international organizations for their conservation, management and study.

17.77. The ability of developing countries to fulfil the above objectives is dependent upon their capabilities, including the financial, scientific and technological means at their disposal. Adequate financial, scientific and technological cooperation should be provided to support action by them to implement these objectives.

Activities

(a) Management-related activities

17.78. States should ensure that marine living resources of the exclusive economic zone and other areas under national jurisdiction are conserved and managed in accordance with the provisions of the United Nations Convention on the Law of the Sea.

17.79. States, in implementing the provisions of the United Nations Convention on the Law of the Sea, should address the issues of straddling

stocks and highly migratory species, and, taking fully into account the objective set out in paragraph 17.74, access to the surplus of allowable catches.

17.80. Coastal States, individually or through bilateral and/or multilateral cooperation and with the support, as appropriate of international organizations, whether subregional, regional or global, should inter alia:

(a) Assess the potential of marine living resources, including underutilized or unutilized stocks and species, by developing inventories, where necessary, for their conservation and sustainable use;

(b) Implement strategies for the sustainable use of marine living resources, taking into account the special needs and interests of small-scale artisanal fisheries, local communities and indigenous people to meet human nutritional and other development needs;

(c) Implement, in particular in developing countries, mechanisms to develop mariculture, aquaculture and small-scale, deep-sea and oceanic fisheries within areas under national jurisdiction where assessments show that marine living resources are potentially available;

(d) Strengthen their legal and regulatory frameworks, where appropriate, including management, enforcement and surveillance capabilities, to regulate activities related to the above strategies;

(e) Take measures to increase the availability of marine living resources as human food by reducing wastage, post-harvest losses and discards, and improving techniques of processing, distribution and transportation;

(f) Develop and promote the use of environmentally sound technology under criteria compatible with the sustainable use of marine living resources, including assessment of the environmental impact of major new fishery practices;

(g) Enhance the productivity and utilization of their marine living resources for food and income.

17.81. Coastal States should explore the scope for expanding recreational and tourist activities based on marine living resources, including those for providing alternative sources of income. Such activities should be compatible with conservation and sustainable development policies and plans.

17.82. Coastal States should support the sustainability of small-scale artisanal fisheries. To this end, they should, as appropriate:

(a) Integrate small-scale artisanal fisheries development in marine and coastal planning, taking into account the interests and, where appropriate, encouraging representation of fishermen, small-scale fisherworkers, women, local communities and indigenous people;

(b) Recognize the rights of small-scale fishworkers and the special situation of indigenous people and local communities, including their rights to utilization and protection of their habitats on a sustainable basis;

(c) Develop systems for the acquisition and recording of traditional knowledge concerning marine living resources and environment and promote the incorporation of such knowledge into management systems.

17.83. Coastal States should ensure that, in the negotiation and implementation of international agreements on the development or conservation of marine living resources, the interests of local communities and indigenous people are taken into account, in particular their right to subsistence.

17.84. Coastal States, with the support, as appropriate, of international organizations, should conduct analyses of the potential for aquaculture in marine and coastal areas under national jurisdiction and apply appropriate safeguards as to the introduction of new species.

17.85. States should prohibit dynamiting, poisoning and other comparable destructive fishing practices.

17.86. States should identify marine ecosystems exhibiting high levels of biodiversity and productivity and other critical habitat areas and should provide necessary limitations on use in these areas, through, inter alia, designation of protected areas. Priority should be accorded, as appropriate, to:

(a) Coral reef ecosystems;

(b) Estuaries;

(c) Temperate and tropical wetlands, including mangroves;

(d) Seagrass beds;

(e) Other spawning and nursery areas.

(b) Data and information

17.87. States, individually or through bilateral and multilateral cooperation and with the support, as appropriate, of international organizations, whether subregional, regional or global, should:

(a) Promote enhanced collection and exchange of data necessary for the conservation and sustainable use of the marine living resources under national jurisdiction;

(b) Exchange on a regular basis up-to-date data and information necessary for fisheries assessment;

(c) Develop and share analytical and predictive tools, such as stock assessment and bioeconomic models;

(d) Establish or expand appropriate monitoring and assessment programmes;

(e) Complete or update marine biodiversity, marine living resource and critical habitat profiles of exclusive economic zones and other areas under national jurisdiction, taking account of changes in the environment brought about by natural causes and human activities.

(c) International and regional cooperation and coordination

17.88. States, through bilateral and multilateral cooperation, and with the support of relevant United Nations and other international organizations, should cooperate to:

(a) Develop financial and technical cooperation to enhance the capacities of developing countries in small-scale and oceanic fisheries, as well as in coastal aquaculture and mariculture;

(b) Promote the contribution of marine living resources to eliminate malnutrition and to achieve food self-sufficiency in developing countries, inter alia, by minimizing post-harvest losses and managing stocks for guaranteed sustainable yields;

(c) Develop agreed criteria for the use of selective fishing gear and practices to minimize waste in the catch of target species and minimize by-catch of non-target species;

(d) Promote seafood quality, including through national quality assurance systems for seafood, in order to promote access to markets, improve consumer confidence and maximize economic returns.

17.89. States should, where and as appropriate, ensure adequate coordination and cooperation in enclosed and semi-enclosed seas and between subregional, regional and global intergovernmental fisheries bodies.

17.90. States recognize:

(a) The responsibility of the International Whaling Commission for the conservation and management of whale stocks and the regulation of whaling pursuant to the 1946 International Convention for the Regulation of Whaling;

(b) The work of the International Whaling Commission Scientific Committee in carrying out studies of large whales in particular, as well as of other cetaceans;

(c) The work of other organizations, such as the Inter-American Tropical Tuna Commission and the Agreement on Small Cetaceans in the Baltic and North Sea under the Bonn Convention, in the conservation, management and study of cetaceans and other marine mammals.

17.91. States should cooperate for the conservation, management and study of cetaceans.

Means of implementation

(a) Financing and cost evaluation

17.92. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $6 billion, including about $60 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

17.93. States, with the support of relevant intergovernmental organizations, as appropriate, should:

(a) Provide for the transfer of environmentally sound technologies to develop fisheries, aquaculture and mariculture, particularly to developing countries;

(b) Accord special attention to mechanisms for transferring resource information and improved fishing and aquaculture technologies to fishing communities at the local level;

(c) Promote the study, scientific assessment and use of appropriate traditional management systems;

(d) Consider observing, as appropriate, the FAO/ICES Code of Practice for Consideration of Transfer and Introduction of Marine and Freshwater Organisms;

(e) Promote scientific research on marine areas of particular importance for marine living resources, such as areas of high diversity, endemism and productivity and migratory stopover points.

(c) Human resource development

17.94. States individually, or through bilateral and multilateral cooperation and with the support of relevant international organizations, whether subregional, regional or global, as appropriate, should encourage and provide support for developing countries, inter alia, to:

(a) Expand multidisciplinary education, training and research on marine living resources, particularly in the social and economic sciences;

(b) Create training opportunities at national and regional levels to support artisanal (including subsistence) fisheries, to develop small-scale use of marine living resources and to encourage equitable participation of local communities, small-scale fish workers, women and indigenous people;

(c) Introduce topics relating to the importance of marine living resources in educational curricula at all levels.

(d) Capacity-building

17.95. Coastal States, with the support of relevant subregional, regional and global agencies, where appropriate, should:

(a) Develop research capacities for assessment of marine living resource populations and monitoring;

(b) Provide support to local fishing communities, in particular those that rely on fishing for subsistence, indigenous people and women, including, as appropriate, the technical and financial assistance to organize, maintain, exchange and improve traditional knowledge of marine living resources and fishing techniques, and upgrade knowledge on marine ecosystems;

(c) Establish sustainable aquaculture development strategies, including environmental management in support of rural fish-farming communities;

(d) Develop and strengthen, where the need may arise, institutions capable of implementing the objectives and activities related to the conservation and management of marine living resources.

17.96. Special support, including cooperation among States, will be needed to enhance the capacities of developing countries in the areas of data and information, scientific and technological means and human resource development in order to enable them to participate effectively in the conservation and sustainable use of marine living resources under national jurisdiction.

E. Addressing critical uncertainties for the management of the marine environment and climate change

Basis for action

17.97. The marine environment is vulnerable and sensitive to climate and atmospheric changes. Rational use and development of coastal areas, all seas and marine resources, as well as conservation of the marine environment, requires the ability to determine the present state of these systems and to predict future conditions. The high degree of uncertainty in present information inhibits effective management and limits the ability to make predictions and assess environmental change. Systematic collection of data on marine environmental parameters will be needed to apply integrated management approaches and to predict effects of global climate change and of atmospheric

phenomena, such as ozone depletion, on living marine resources and the marine environment. In order to determine the role of the oceans and all seas in driving global systems and to predict natural and human-induced changes in marine and coastal environments, the mechanisms to collect, synthesize and disseminate information from research and systematic observation activities need to be restructured and reinforced considerably.

17.98. There are many uncertainties about climate change and particularly about sealevel rise. Small increases in sealevel have the potential of causing significant damage to small islands and low-lying coasts. Response strategies should be based on sound data. A long-term cooperative research commitment is needed to provide the data required for global climate models and to reduce uncertainty. Meanwhile, precautionary measures should be undertaken to diminish the risks and effects, particularly on small islands and on low-lying and coastal areas of the world.

17.99. Increased ultraviolet radiation derived from ozone depletion has been reported in some areas of the world. An assessment of its effects in the marine environment is needed to reduce uncertainty and to provide a basis for action.

Objectives

17.100. States, in accordance with provisions of the United Nations Convention on the Law of the Sea on marine scientific research, commit themselves to improving the understanding of the marine environment and its role on global processes. To this end, it is necessary to:

(a) Promote scientific research on and systematic observation of the marine environment within the limits of national jurisdiction and high seas, including interactions with atmospheric phenomena, such as ozone depletion;

(b) Promote exchange of data and information resulting from scientific research and systematic observation and from traditional ecological knowledge and ensure its availability to policy makers and the public at the national level;

(c) Cooperate with a view to the development of standard inter-calibrated procedures, measuring techniques, data storage and management capabilities for scientific research on and systematic observation of the marine environment.

Activities

(a) Management-related activities

17.101. States should consider, inter alia:

(a) Coordinating national and regional observation programmes for coastal and near-shore phenomena related to climate change and for research parameters essential for marine and coastal management in all regions;

(b) Providing improved forecasts of marine conditions for the safety of inhabitants of coastal areas and for the efficiency of maritime operations;

(c) Cooperating with a view to adopting special measures to cope with and adapt to potential climate change and sealevel rise, including the development of globally accepted methodologies for coastal vulnerability assessment, modelling and response strategies particularly for priority areas, such as small islands and low-lying and critical coastal areas;

(d) Identifying ongoing and planned programmes of systematic observation of the marine environment, with a view to integrating activities and establishing priorities to address critical uncertainties for oceans and all seas;

(e) Initiating a programme of research to determine the marine biological effects of increased levels of ultraviolet rays due to the depletion of the stratospheric ozone layer and to evaluate the possible effects.

17.102. Recognizing the important role that oceans and all seas play in attenuating potential climate change, IOC and other relevant competent United Nations bodies, with the support of countries having the resources and expertise, should carry out analysis, assessments and systematic observation of the role of oceans as a carbon sink.

(b) Data and information

17.103. States should consider, inter alia:

(a) Increasing international cooperation particularly with a view to strengthening national scientific and technological capabilities for analysing, assessing and predicting global climate and environmental change;

(b) Supporting the role of the IOC in cooperation with WMO, UNEP and other international organizations in the collection, analysis and distribution of data and information from the oceans and all seas, including as appropriate, through the proposed Global Ocean Observing System, giving special attention to the need for IOC to develop fully the strategy for providing training and technical assistance for developing countries through its Training, Education and Mutual Assistance (TEMA) programme;

(c) Creating national multisectoral information bases, covering the results of research and systematic observation programmes;

(d) Linking these databases to existing data and information services and mechanisms, such as World Weather Watch and Earthwatch;

(e) Cooperating with a view to the exchange of data and information and its storage and archiving through the world and regional data centres;

(f) Cooperating to ensure full participation of developing countries, in particular, in any international scheme under the organs and organizations of the United Nations system for the collection, analysis and use of data and information.

(c) International and regional cooperation and coordination

17.104. States should consider bilaterally and multilaterally and in cooperation with international organizations, whether subregional, regional, interregional or global, where appropriate:

(a) Providing technical cooperation in developing the capacity of coastal and island States for marine research and systematic observation and for using its results;

(b) Strengthening existing national institutions and creating, where necessary, international analysis and prediction mechanisms in order to prepare and exchange regional and global oceanographic analyses and forecasts and to provide facilities for international research and training at national, subregional and regional levels, where applicable.

17.105. In recognition of the value of Antarctica as an area for the conduct of scientific research, in particular research essential to understanding the global environment, States carrying out such research activities in Antarctica should, as provided for in Article III of the Antarctic Treaty, continue to:

(a) Ensure that data and information resulting from such research are freely available to the international community;

(b) Enhance access of the international scientific community and specialized agencies of the United Nations to such data and information, including the encouragement of periodic seminars and symposia.

17.106. States should strengthen high-level inter-agency, subregional, regional and global coordination, as appropriate, and review mechanisms to develop and integrate systematic observation networks. This would include:

(a) Review of existing regional and global databases;

(b) Mechanisms to develop comparable and compatible techniques, validate methodologies and measurements, organize regular scientific reviews, develop options for corrective measures, agree on formats for presentation and storage, and communicate the information gathered to potential users;

(c) Systematic observation of coastal habitats and sealevel changes, inventories of marine pollution sources and reviews of fisheries statistics;

(d) Organization of periodic assessments of ocean and all seas and coastal area status and trends.

17.107. International cooperation, through relevant organizations within the United Nations system, should support countries to develop and integrate regional systematic long-term observation programmes, when applicable, into the Regional Seas Programmes in a coordinated fashion to implement, where appropriate, subregional, regional and global observing systems based on the principle of exchange of data. One aim should be the predicting of the effects of climate-related emergencies on existing coastal physical and socio-economic infrastructure.

17.108. Based on the results of research on the effects of the additional ultraviolet radiation reaching the Earth's surface, in the fields of human health, agriculture and marine environment, States and international organizations should consider taking appropriate remedial measures.

Means of implementation

(a) Financing and cost evaluation

17.109. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $750 million, including about $480 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

17.110. Developed countries should provide the financing for the further development and implementation of the Global Ocean Observing System.

(b) Scientific and technological means

17.111. To address critical uncertainties through systematic coastal and marine observations and research, coastal States should cooperate in the development of procedures that allow for comparable analysis and soundness of data. They should also cooperate on a subregional and regional basis, through existing programmes where applicable, share infrastructure and expensive and sophisticated equipment, develop quality assurance procedures and develop human resources jointly. Special attention should be given to transfer of scientific and technological knowledge and means to support States, particularly developing countries, in the development of endogenous capabilities.

17.112. International organizations should support, when requested, coastal countries in implementing research projects on the effects of additional ultraviolet radiation.

(c) Human resource development

17.113. States, individually or through bilateral and multilateral cooperation and with the support, as appropriate, of international organizations whether subregional, regional or global, should develop and implement comprehensive programmes, particularly in developing countries, for a broad and coherent approach to meeting their core human resource needs in the marine sciences.

(d) Capacity-building

17.114. States should strengthen or establish as necessary, national scientific and technological oceanographic commissions or equivalent bodies to develop, support and coordinate marine science activities and work closely with international organizations.

17.115. States should use existing subregional and regional mechanisms, where applicable, to develop knowledge of the marine environment, exchange information, organize systematic observations and assessments, and make the most effective use of scientists, facilities and equipment. They should also cooperate in the promotion of endogenous research capabilities in developing countries.

F. Strengthening international, including regional, cooperation and coordination

Basis for action

17.116. It is recognized that the role of international cooperation is to support and supplement national efforts. Implementation of strategies and activities under the programme areas relative to marine and coastal areas and seas requires effective institutional arrangements at national, subregional, regional and global levels, as appropriate. There are numerous national and international, including regional, institutions, both within and outside the United Nations system, with competence in marine issues, and there is a need to improve coordination and strengthen links among them. It is also important to ensure that an integrated and multisectoral approach to marine issues is pursued at all levels.

Objectives

17.117. States commit themselves, in accordance with their policies, priorities and resources, to promoting institutional arrangements necessary to support the implementation of the programme areas in this chapter. To this end, it is necessary, as appropriate, to:

(a) Integrate relevant sectoral activities addressing environment and development in marine and coastal areas at national, subregional, regional and global levels, as appropriate;

(b) Promote effective information exchange and, where appropriate, institutional linkages between bilateral and multilateral national, regional, subregional and interregional institutions dealing with environment and development in marine and coastal areas;

(c) Promote within the United Nations system, regular intergovernmental review and consideration of environment and development issues with respect to marine and coastal areas;

(d) Promote the effective operation of coordinating mechanisms for the components of the United Nations system dealing with issues of environment and development in marine and coastal areas, as well as links with relevant international development bodies.

Activities

(a) Management-related activities

Global

17.118. The General Assembly should provide for regular consideration, within the United Nations system, at the intergovernmental level of general marine and coastal issues, including environment and development matters, and should request the Secretary-General and executive heads of United Nations agencies and organizations to:

(a) Strengthen coordination and develop improved arrangements among the relevant United Nations organizations with major marine and coastal responsibilities, including their subregional and regional components;

(b) Strengthen coordination between those organizations and other United Nations organizations, institutions and specialized agencies dealing with development, trade and other related economic issues, as appropriate;

(c) Improve representation of United Nations agencies dealing with the marine environment in United Nations system-wide coordination efforts;

(d) Promote, where necessary, greater collaboration between the United Nations agencies and subregional and regional coastal and marine programmes;

(e) Develop a centralized system to provide for information on legislation and advice on implementation of legal agreements on marine environmental and development issues.

17.119. States recognize that environmental policies should deal with the root causes of environmental degradation, thus preventing environmental measures from resulting in unnecessary restrictions to trade. Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade. Unilateral actions to deal with environmental challenges outside the

jurisdiction of the importing country should be avoided. Environmental measures addressing international environmental problems should, as far as possible, be based on an international consensus. Domestic measures targeted to achieve certain environmental objectives may need trade measures to render them effective. Should trade policy measures be found necessary for the enforcement of environmental policies, certain principles and rules should apply. These could include, inter alia, the principle of non-discrimination; the principle that the trade measure chosen should be the least trade-restrictive necessary to achieve the objectives; an obligation to ensure transparency in the use of trade measures related to the environment and to provide adequate notification of national regulations; and the need to give consideration to the special conditions and development requirements of developing countries as they move towards internationally agreed environmental objectives.

Subregional and regional

17.120. States should consider, as appropriate:

(a) Strengthening, and extending where necessary, intergovernmental regional cooperation, the Regional Seas Programmes of UNEP, regional and subregional fisheries organizations and regional commissions;

(b) Introduce, where necessary, coordination among relevant United Nations and other multilateral organizations at the subregional and regional levels, including consideration of co-location of their staff;

(c) Arrange for periodic intraregional consultations;

(d) Facilitate access to and use of expertise and technology through relevant national bodies to subregional and regional centres and networks, such as the Regional Centres for Marine Technology.

(b) Data and information

17.121. States should, where appropriate:

(a) Promote exchange of information on marine and coastal issues;

(b) Strengthen the capacity of international organizations to handle information and support the development of national, subregional and regional data and information systems, where appropriate. This could also include networks linking countries with comparable environmental problems;

(c) Further develop existing international mechanisms such as Earthwatch and GESAMP.

Means of implementation

(a) Financing and cost evaluation

17.122. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $50 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means, human resource development and capacity-building

17.123. The means of implementation outlined in the other programme areas on marine and coastal issues, under the sections on Scientific and technological means, human resource development and capacity-building are entirely relevant for this programme area as well. Additionally, States should, through international cooperation, develop a comprehensive programme for meeting the core human resource needs in marine sciences at all levels.

G. Sustainable development of small islands

Basis for action

17.124. Small island developing States, and islands supporting small communities are a special case both for environment and development. They are ecologically fragile and vulnerable. Their small size, limited resources, geographic dispersion and isolation from markets, place them at a disadvantage economically and prevent economies of scale. For small island developing States the ocean and coastal environment is of strategic importance and constitutes a valuable development resource.

17.125. Their geographic isolation has resulted in their habitation of a comparatively large number of unique species of flora and fauna, giving them a very high share of global biodiversity. They also have rich and diverse cultures with special adaptations to island environments and knowledge of the sound management of island resources.

17.126. Small island developing States have all the environmental problems and challenges of the coastal zone concentrated in a limited land area. They are considered extremely vulnerable to global warming and sealevel rise, with certain small low-lying islands facing the increasing threat of the loss of their entire national territories. Most tropical islands are also now experiencing the more immediate impacts of increasing frequency of cyclones, storms and hurricanes associated with climate change. These are causing major set-backs to their socio-economic development.

17.127. Because small island development options are limited, there are special challenges to planning for and implementing sustainable development. Small island developing States will be constrained in meeting these challenges without the cooperation and assistance of the international community.

Objectives

17.128. States commit themselves to addressing the problems of sustainable development of small island developing States. To this end, it is necessary:

(a) To adopt and implement plans and programmes to support the sustainable development and utilization of their marine and coastal resources, including meeting essential human needs, maintaining biodiversity and improving the quality of life for island people;

(b) To adopt measures which will enable small island developing States to cope effectively, creatively and sustainably with environmental change and to mitigate impacts and reduce the threats posed to marine and coastal resources.

Activities

(a) Management-related activities

17.129. Small island developing States, with the assistance as appropriate of the international community and on the basis of existing work of national and international organizations, should:

(a) Study the special environmental and developmental characteristics of small islands, producing an environmental profile and inventory of their natural resources, critical marine habitats and biodiversity;

(b) Develop techniques for determining and monitoring the carrying capacity of small islands under different development assumptions and resource constraints;

(c) Prepare medium- and long-term plans for sustainable development that emphasize multiple use of resources, integrate environmental considerations with economic and sectoral planning and policies, define measures for maintaining cultural and biological diversity and conserve endangered species and critical marine habitats;

(d) Adapt coastal area management techniques, such as planning, siting and environmental impact assessments, using Geographical Information Systems (GIS), suitable to the special characteristics of small islands, taking into account the traditional and cultural values of indigenous people of island countries;

(e) Review the existing institutional arrangements and identify and undertake appropriate institutional reforms essential to the effective

implementation of sustainable development plans, including intersectoral coordination and community participation in the planning process;

(f) Implement sustainable development plans, including the review and modification of existing unsustainable policies and practices;

(g) Based on precautionary and anticipatory approaches, design and implement rational response strategies to address the environmental, social and economic impacts of climate change and sealevel rise, and prepare appropriate contingency plans;

(h) Promote environmentally sound technology for sustainable development within small island developing States and identify technologies that should be excluded because of their threats to essential island ecosystems.

(b) Data and information

17.130. Additional information on the geographic, environmental, cultural and socio-economic characteristics of islands should be compiled and assessed to assist in the planning process. Existing island databases should be expanded and geographic information systems developed and adapted to suit the special characteristics of islands.

(c) International and regional cooperation and coordination

17.131. Small island developing States, with the support, as appropriate, of international organizations, whether subregional, regional or global, should develop and strengthen inter-island, regional and interregional cooperation and information exchange, including periodic regional and global meetings on sustainable development of small island developing States, with the first global conference on the sustainable development of small island developing States to be held in 1993.

17.132. International organizations, whether subregional, regional or global, must recognize the special development requirements of small island developing States and give adequate priority in the provision of assistance, particularly with respect to the development and implementation of sustainable development plans.

Means of implementation

(a) Financing and cost evaluation

17.133. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $130 million, including about $50 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technical means

17.134. Centres for the development and diffusion of scientific information and advice on technical means and technologies appropriate to small island developing States, especially with reference to the management of the coastal zone, the exclusive economic zone and marine resources, should be established or strengthened, as appropriate, on a regional basis.

(c) Human resource development

17.135. Since populations of small island developing States cannot maintain all necessary specializations, training for integrated coastal management and development should aim to produce cadres of managers or scientists, engineers and coastal planners able to integrate the many factors that need to be considered in integrated coastal management. Resource users should be prepared to execute both management and protection functions and to apply the polluter pays principle and support the training of their personnel. Educational systems should be modified to meet these needs and special training programmes developed in integrated island management and development. Local planning should be integrated in educational curricula of all levels and public awareness campaigns developed with the assistance of non-governmental organizations and indigenous coastal populations.

(d) Capacity-building

17.136. The total capacity of small island developing States will always be limited. Existing capacity must therefore be restructured to meet efficiently the immediate needs for sustainable development and integrated management. At the same time, adequate and appropriate assistance from the international community must be directed at strengthening the full range of human resources needed on a continuous basis to implement sustainable development plans.

17.137. New technologies that can increase the output and range of capability of the limited human resources should be employed to increase the capacity of very small populations to meet their needs. The development and application of traditional knowledge to improve the capacity of countries to implement sustainable development should be fostered.

Notes

1/ References to the United Nations Convention on the Law of the Sea in this chapter of Agenda 21 do not prejudice the position of any State with respect to signature, ratification of or accession to the Convention.

2/ References to the United Nations Convention on the Law of the Sea in this chapter of Agenda 21 do not prejudice the position of States which view the Convention as having a unified character.

3/ Nothing in the programme areas of this chapter should be interpreted as prejudicing the rights of the States involved in a dispute of sovereignty or in the delimitation of the maritime areas concerned.

Chapter 18

PROTECTION OF THE QUALITY AND SUPPLY OF FRESHWATER RESOURCES: APPLICATION OF INTEGRATED APPROACHES TO THE DEVELOPMENT, MANAGEMENT AND USE OF WATER RESOURCES

INTRODUCTION

18.1. Freshwater resources are an essential component of the Earth's hydrosphere and an indispensable part of all terrestrial ecosystems. The freshwater environment is characterized by the hydrological cycle, including floods and droughts, which in some regions have become more extreme and dramatic in their consequences. Global climate change and atmospheric pollution could also have an impact on freshwater resources and their availability and, through sealevel rise, threaten low-lying coastal areas and small island ecosystems.

18.2. Water is needed in all aspects of life. The general objective is to make certain that adequate supplies of water of good quality are maintained for the entire population of this planet, while preserving the hydrological, biological and chemical functions of ecosystems, adapting human activities within the capacity limits of nature and combating vectors of water-related diseases. Innovative technologies, including the improvement of indigenous technologies, are needed to fully utilize limited water resources and to safeguard those resources against pollution.

18.3. The widespread scarcity, gradual destruction and aggravated pollution of freshwater resources in many world regions, along with the progressive encroachment of incompatible activities, demand integrated water resources planning and management. Such integration must cover all types of interrelated freshwater bodies, including both surface water and groundwater, and duly consider water quantity and quality aspects. The multisectoral nature of water resources development in the context of socio-economic development must be recognized, as well as the multi-interest utilization of water resources for water supply and sanitation, agriculture, industry, urban development, hydropower generation, inland fisheries, transportation, recreation, low and flat lands management and other activities. Rational water utilization schemes for the development of surface and underground water-supply sources and other potential sources have to be supported by concurrent water conservation and wastage minimization measures. Priority, however, must be accorded to flood prevention and control measures, as well as sedimentation control, where required.

18.4. Transboundary water resources and their use are of great importance to riparian States. In this connection, cooperation among those States may be desirable in conformity with existing agreements and/or other relevant arrangements, taking into account the interests of all riparian States concerned.

18.5. The following programme areas are proposed for the freshwater sector:

(a) Integrated water resources development and management;

(b) Water resources assessment;

(c) Protection of water resources, water quality and aquatic ecosystems;

(d) Drinking-water supply and sanitation;

(e) Water and sustainable urban development;

(f) Water for sustainable food production and rural development;

(g) Impacts of climate change on water resources.

PROGRAMME AREAS

A. Integrated water resources development and management

Basis for action

18.6. The extent to which water resources development contributes to economic productivity and social well-being is not usually appreciated, although all social and economic activities rely heavily on the supply and quality of freshwater. As populations and economic activities grow, many countries are rapidly reaching conditions of water scarcity or facing limits to economic development. Water demands are increasing rapidly, with 70-80 per cent required for irrigation, less than 20 per cent for industry and a mere 6 per cent for domestic consumption. The holistic management of freshwater as a finite and vulnerable resource, and the integration of sectoral water plans and programmes within the framework of national economic and social policy, are of paramount importance for action in the 1990s and beyond. The fragmentation of responsibilities for water resources development among sectoral agencies is proving, however, to be an even greater impediment to promoting integrated water management than had been anticipated. Effective implementation and coordination mechanisms are required.

Objectives

18.7. The overall objective is to satisfy the freshwater needs of all countries for their sustainable development.

18.8. Integrated water resources management is based on the perception of water as an integral part of the ecosystem, a natural resource and a social and economic good, whose quantity and quality determine the nature of its utilization. To this end, water resources have to be protected, taking into account the functioning of aquatic ecosystems and the perenniality of the resource, in order to satisfy and reconcile needs for water in human activities. In developing and using water resources, priority has to be given to the satisfaction of basic needs and the safeguarding of ecosystems. Beyond these requirements, however, water users should be charged appropriately.

18.9. Integrated water resources management, including the integration of land- and water-related aspects, should be carried out at the level of the catchment basin or sub-basin. Four principal objectives should be pursued, as follows:

(a) To promote a dynamic, interactive, iterative and multisectoral approach to water resources management, including the identification and protection of potential sources of freshwater supply, that integrates technological, socio-economic, environmental and human health considerations;

(b) To plan for the sustainable and rational utilization, protection, conservation and management of water resources based on community needs and priorities within the framework of national economic development policy;

(c) To design, implement and evaluate projects and programmes that are both economically efficient and socially appropriate within clearly defined strategies, based on an approach of full public participation, including that of women, youth, indigenous people and local communities in water management policy-making and decision-making;

(d) To identify and strengthen or develop, as required, in particular in developing countries, the appropriate institutional, legal and financial mechanisms to ensure that water policy and its implementation are a catalyst for sustainable social progress and economic growth.

18.10. In the case of transboundary water resources, there is a need for riparian States to formulate water resources strategies, prepare water resources action programmes and consider, where appropriate, the harmonization of those strategies and action programmes.

18.11. All States, according to their capacity and available resources, and through bilateral or multilateral cooperation, including the United Nations and other relevant organizations as appropriate, could set the following targets:

(a) By the year 2000:

(i) To have designed and initiated, costed and targeted national action programmes, and to have put in place appropriate institutional structures and legal instruments;

(ii) To have established efficient water-use programmes to attain sustainable resource utilization patterns;

(b) By the year 2025:

To have achieved subsectoral targets of all freshwater programme areas.

It is understood that the fulfilment of the targets quantified in (i) and (ii) above will depend upon new and additional financial resources that will be made available to developing countries in accordance with the relevant provisions of General Assembly resolution 44/228.

Activities

18.12. All States, according to their capacity and available resources, and through bilateral or multilateral cooperation, including the United Nations and other relevant organizations as appropriate, could implement the following activities to improve integrated water resources management:

(a) Formulation of costed and targeted national action plans and investment programmes;

(b) Integration of measures for the protection and conservation of potential sources of freshwater supply, including the inventorying of water resources, with land-use planning, forest resource utilization, protection of mountain slopes and riverbanks and other relevant development and conservation activities;

(c) Development of interactive databases, forecasting models, economic planning models and methods for water management and planning, including environmental impact assessment methods;

(d) Optimization of water resources allocation under physical and socio-economic constraints;

(e) Implementation of allocation decisions through demand management, pricing mechanisms and regulatory measures;

(f) Flood and drought management, including risk analysis and environmental and social impact assessment;

(g) Promotion of schemes for rational water use through public awareness-raising, educational programmes and levying of water tariffs and other economic instruments;

(h) Mobilization of water resources, particularly in arid and semi-arid areas;

(i) Promotion of international scientific research cooperation on freshwater resources;

(j) Development of new and alternative sources of water-supply such as sea-water desalination, artificial groundwater recharge, use of marginal-quality water, waste-water reuse and water recycling;

(k) Integration of water (including surface and underground water resources) quantity and quality management;

(l) Promotion of water conservation through improved water-use efficiency and wastage minimization schemes for all users, including the development of water-saving devices;

(m) Support to water-users groups to optimize local water resources management;

(n) Development of public participatory techniques and their implementation in decision-making, particularly the enhancement of the role of women in water resources planning and management;

(o) Development and strengthening, as appropriate, of cooperation, including mechanisms where appropriate, at all levels concerned, namely:

(i) At the lowest appropriate level, delegation of water resources management, generally, to such a level, in accordance with national legislation, including decentralization of government services to local authorities, private enterprises and communities;

(ii) At the national level, integrated water resources planning and management in the framework of the national planning process and, where appropriate, establishment of independent regulation and monitoring of freshwater, based on national legislation and economic measures;

(iii) At the regional level, consideration, where appropriate, of the harmonization of national strategies and action programmes;

(iv) At the global level, improved delineation of responsibilities, division of labour and coordination of international organizations and programmes, including facilitating discussions and sharing of experiences in areas related to water resources management;

(p) Dissemination of information, including operational guidelines, and promotion of education for water users, including the consideration by the United Nations of a World Water Day.

Means of implementation

(a) Financing and cost evaluation

18.13. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $115 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

18.14. The development of interactive databases, forecasting methods and economic planning models appropriate to the task of managing water resources in an efficient and sustainable manner will require the application of new techniques such as geographical information systems and expert systems to gather, assimilate, analyse and display multisectoral information and to optimize decision-making. In addition, the development of new and alternative sources of water-supply and low-cost water technologies will require innovative applied research. This will involve the transfer, adaptation and diffusion of new techniques and technology among developing countries, as well as the development of endogenous capacity, for the purpose of being able to deal with the added dimension of integrating engineering, economic, environmental and social aspects of water resources management and predicting the effects in terms of human impact.

18.15. Pursuant to the recognition of water as a social and economic good, the various available options for charging water users (including domestic, urban, industrial and agricultural water-user groups) have to be further evaluated and field-tested. Further development is required for economic instruments that take into account opportunity costs and environmental externalities. Field studies on the willingness to pay should be conducted in rural and urban situations.

18.16. Water resources development and management should be planned in an integrated manner, taking into account long-term planning needs as well as those with narrower horizons, that is to say, they should incorporate environmental, economic and social considerations based on the principle of sustainability; include the requirements of all users as well as those relating to the prevention and mitigation of water-related hazards; and constitute an integral part of the socio-economic development planning process. A prerequisite for the sustainable management of water as a scarce vulnerable resource is the obligation to acknowledge in all planning and development its full costs. Planning considerations should reflect benefits investment, environmental protection and operation costs, as well as the opportunity costs reflecting the most valuable alternative use of water. Actual charging need not necessarily burden all beneficiaries with the consequences of those considerations. Charging mechanisms should, however, reflect as far as possible both the true cost of water when used as an economic good and the ability of the communities to pay.

18.17. The role of water as a social, economic and life-sustaining good should be reflected in demand management mechanisms and implemented through water conservation and reuse, resource assessment and financial instruments.

18.18. The setting afresh of priorities for private and public investment strategies should take into account (a) maximum utilization of existing projects, through maintenance, rehabilitation and optimal operation; (b) new or alternative clean technologies; and (c) environmentally and socially benign hydropower.

(c) Human resources development

18.19. The delegation of water resources management to the lowest appropriate level necessitates educating and training water management staff at all levels and ensuring that women participate equally in the education and training programmes. Particular emphasis has to be placed on the introduction of public participatory techniques, including enhancement of the role of women, youth, indigenous people and local communities. Skills related to various water management functions have to be developed by municipal government and water authorities, as well as in the private sector, local/national non-governmental organizations, cooperatives, corporations and other water-user groups. Education of the public regarding the importance of water and its proper management is also needed.

18.20. To implement these principles, communities need to have adequate capacities. Those who establish the framework for water development and management at any level, whether international, national or local, need to ensure that the means exist to build those capacities. The means will vary from case to case. They usually include:

(a) Awareness-creation programmes, including mobilizing commitment and support at all levels and initiating global and local action to promote such programmes;

(b) Training of water managers at all levels so that they have an appropriate understanding of all the elements necessary for their decision-making;

(c) Strengthening of training capacities in developing countries;

(d) Appropriate training of the necessary professionals, including extension workers;

(e) Improvement of career structures;

(f) Sharing of appropriate knowledge and technology, both for the collection of data and for the implementation of planned development including non-polluting technologies and the knowledge needed to extract the best performance from the existing investment system.

(d) Capacity-building

18.21. Institutional capacity for implementing integrated water management should be reviewed and developed when there is a clear demand. Existing administrative structures will often be quite capable of achieving local water resources management, but the need may arise for new institutions based upon the perspective, for example, of river catchment areas, district development councils and local community committees. Although water is managed at various levels in the socio-political system, demand-driven management requires the development of water-related institutions at appropriate levels, taking into account the need for integration with land-use management.

18.22. In creating the enabling environment for lowest-appropriate-level management, the role of Government includes mobilization of financial and human resources, legislation, standard-setting and other regulatory functions, monitoring and assessment of the use of water and land resources, and creating of opportunities for public participation. International agencies and donors have an important role to play in providing support to developing countries in creating the required enabling environment for integrated water resources management. This should include, as appropriate, donor support to local levels in developing countries, including community-based institutions, non-governmental organizations and women's groups.

B. Water resources assessment

Basis for action

18.23. Water resources assessment, including the identification of potential sources of freshwater supply, comprises the continuing determination of sources, extent, dependability and quality of water resources and of the human activities that affect those resources. Such assessment constitutes the practical basis for their sustainable management and a prerequisite for evaluation of the possibilities for their development. There is, however, growing concern that at a time when more precise and reliable information is needed about water resources, hydrologic services and related bodies are less able than before to provide this information, especially information on groundwater and water quality. Major impediments are the lack of financial resources for water resources assessment, the fragmented nature of hydrologic services and the insufficient numbers of qualified staff. At the same time, the advancing technology for data capture and management is increasingly difficult to access for developing countries. Establishment of national databases is, however, vital to water resources assessment and to mitigation of the effects of floods, droughts, desertification and pollution.

Objectives

18.24. Based upon the Mar del Plata Action Plan, this programme area has been extended into the 1990s and beyond with the overall objective of ensuring the assessment and forecasting of the quantity and quality of water resources, in order to estimate the total quantity of water resources available and their future supply potential, to determine their current quality status, to predict possible conflicts between supply and demand and to provide a scientific database for rational water resources utilization.

18.25. Five specific objectives have been set accordingly, as follows:

(a) To make available to all countries water resources assessment technology that is appropriate to their needs, irrespective of their level of development, including methods for the impact assessment of climate change on freshwaters;

(b) To have all countries, according to their financial means, allocate to water resources assessment financial resources in line with the economic and social needs for water resources data;

(c) To ensure that the assessment information is fully utilized in the development of water management policies;

(d) To have all countries establish the institutional arrangements needed to ensure the efficient collection, processing, storage, retrieval and dissemination to users of information about the quality and quantity of available water resources at the level of catchments and groundwater aquifers in an integrated manner;

(e) To have sufficient numbers of appropriately qualified and capable staff recruited and retained by water resources assessment agencies and provided with the training and retraining they will need to carry out their responsibilities successfully.

18.26. All States, according to their capacity and available resources, and through bilateral or multilateral cooperation, including cooperation with the United Nations and other relevant organizations, as appropriate, could set the following targets:

(a) By the year 2000, to have studied in detail the feasibility of installing water resources assessment services;

(b) As a long-term target, to have fully operational services available based upon high-density hydrometric networks.

Activities

18.27. All States, according to their capacity and available resources, and through bilateral or multilateral cooperation, including the United Nations and other relevant organizations as appropriate, could undertake the following activities:

(a) Institutional framework:

(i) Establish appropriate policy frameworks and national priorities;

(ii) Establish and strengthen the institutional capabilities of countries, including legislative and regulatory arrangements, that are required to ensure the adequate assessment of their water resources and the provision of flood and drought forecasting services;

(iii) Establish and maintain effective cooperation at the national level between the various agencies responsible for the collection, storage and analysis of hydrologic data;

(iv) Cooperate in the assessment of transboundary water resources, subject to the prior agreement of each riparian State concerned;

(b) Data systems:

(i) Review existing data-collection networks and assess their adequacy, including those that provide real-time data for flood and drought forecasting;

(ii) Improve networks to meet accepted guidelines for the provision of data on water quantity and quality for surface and groundwater, as well as relevant land-use data;

(iii) Apply standards and other means to ensure data compatibility;

(iv) Upgrade facilities and procedures used to store, process and analyse hydrologic data and make such data and the forecasts derived from them available to potential users;

(v) Establish databases on the availability of all types of hydrologic data at the national level;

(vi) Implement "data rescue" operations, for example, establishment of national archives of water resources;

(vii) Implement appropriate well-tried techniques for the processing of hydrologic data;

(viii) Derive area-related estimates from point hydrologic data;

(ix) Assimilate remotely sensed data and the use, where appropriate, of geographical information systems;

(c) Data dissemination:

(i) Identify the need for water resources data for various planning purposes;

(ii) Analyse and present data and information on water resources in the forms required for planning and management of countries' socio-economic development and for use in environmental protection strategies and in the design and operation of specific water-related projects;

(iii) Provide forecasts and warnings of flood and drought to the general public and civil defence;

(d) Research and development:

(i) Establish or strengthen research and development programmes at the national, subregional, regional and international levels in support of water resources assessment activities;

(ii) Monitor research and development activities to ensure that they make full use of local expertise and other local resources and that they are appropriate for the needs of the country or countries concerned.

Means of implementation

(a) Financing and cost evaluation

18.28. The Conference secretariat has estimated the everage total annual cost (1993-2000) of implementing the activities of this programme to be about $355 million, including about $145 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

18.29. Important research needs include (a) development of global hydrologic models in support of analysis of climate change impact and of macroscale water resources assessment; (b) closing of the gap between terrestrial hydrology and ecology at different scales, including the critical water-related processes behind loss of vegetation and land degradation and its restoration; and (c) study of the key processes in water-quality genesis, closing the gap between hydrologic flows and biogeochemical processes. The research models should build upon hydrologic balance studies and also include the consumptive use of water. This approach should also, when appropriate, be applied at the catchment level.

18.30. Water resources assessment necessitates the strengthening of existing systems for technology transfer, adaptation and diffusion, and the development of new technology for use under field conditions, as well as the development of endogenous capacity. Prior to inaugurating the above activities, it is necessary to prepare catalogues of the water resources information held by government services, the private sector, educational institutes, consultants, local water-use organizations and others.

(c) Human resource development

18.31. Water resources assessment requires the establishment and maintenance of a body of well-trained and motivated staff sufficient in number to undertake the above activities. Education and training programmes designed to ensure an adequate supply of these trained personnel should be established or strengthened at the local, national, subregional or regional level. In addition, the provision of attractive terms of employment and career paths for

professional and technical staff should be encouraged. Human resource needs should be monitored periodically, including all levels of employment. Plans have to be established to meet those needs through education and training opportunities and international programmes of courses and conferences.

18.32. Because well-trained people are particularly important to water resources assessment and hydrologic forecasting, personnel matters should receive special attention in this area. The aim should be to attract and retain personnel to work on water resources assessment who are sufficient in number and adequate in their level of education to ensure the effective implementation of the activities that are planned. Education may be called for at both the national and the international level, with adequate terms of employment being a national responsibility.

18.33. Recommended actions include:

(a) Identifying education and training needs geared to the specific requirements of countries;

(b) Establishing and strengthening education and training programmes on water-related topics, within an environmental and developmental context, for all categories of staff involved in water resources assessment activities, using advanced educational technology, where appropriate, and involving both men and women;

(c) Developing sound recruitment, personnel and pay policies for staff of national and local water agencies.

(d) Capacity-building

18.34. The conduct of water resources assessment on the basis of operational national hydrometric networks requires an enabling environment at all levels. The following national support action is necessary for enhanced national capacities:

(a) Review of the legislative and regulatory basis of water resources assessment;

(b) Facilitation of close collaboration among water sector agencies, particularly between information producers and users;

(c) Implementation of water management policies based upon realistic appraisals of water resources conditions and trends;

(d) Strengthening of the managerial capabilities of water-user groups, including women, youth, indigenous people and local communities, to improve water-use efficiency at the local level.

C. Protection of water resources, water quality and aquatic ecosystems

Basis for action

18.35. Freshwater is a unitary resource. Long-term development of global freshwater requires holistic management of resources and a recognition of the interconnectedness of the elements related to freshwater and freshwater quality. There are few regions of the world that are still exempt from problems of loss of potential sources of freshwater supply, degraded water quality and pollution of surface and groundwater sources. Major problems affecting the water quality of rivers and lakes arise, in variable order of importance according to different situations, from inadequately treated domestic sewage, inadequate controls on the discharges of industrial waste waters, loss and destruction of catchment areas, ill-considered siting of industrial plants, deforestation, uncontrolled shifting cultivation and poor agricultural practices. This gives rise to the leaching of nutrients and pesticides. Aquatic ecosystems are disturbed and living freshwater resources are threatened. Under certain circumstances, aquatic ecosystems are also affected by agricultural water resource development projects such as dams, river diversions, water installations and irrigation schemes. Erosion, sedimentation, deforestation and desertification have led to increased land degradation, and the creation of reservoirs has, in some cases, resulted in adverse effects on ecosystems. Many of these problems have arisen from a development model that is environmentally destructive and from a lack of public awareness and education about surface and groundwater resource protection. Ecological and human health effects are the measurable consequences, although the means to monitor them are inadequate or non-existent in many countries. There is a widespread lack of perception of the linkages between the development, management, use and treatment of water resources and aquatic ecosystems. A preventive approach, where appropriate, is crucial to the avoiding of costly subsequent measures to rehabilitate, treat and develop new water supplies.

Objectives

18.36. The complex interconnectedness of freshwater systems demands that freshwater management be holistic (taking a catchment management approach) and based on a balanced consideration of the needs of people and the environment. The Mar del Plata Action Plan has already recognized the intrinsic linkage between water resource development projects and their significant physical, chemical, biological, health and socio-economic repercussions. The overall environmental health objective was set as follows: "to evaluate the consequences which the various users of water have on the environment, to support measures aimed at controlling water-related diseases, and to protect ecosystems". 1/

18.37. The extent and severity of contamination of unsaturated zones and aquifers have long been underestimated owing to the relative inaccessibility of aquifers and the lack of reliable information on aquifer systems. The

protection of groundwater is therefore an essential element of water resource management.

18.38. Three objectives will have to be pursued concurrently to integrate water-quality elements into water resource management:

(a) Maintenance of ecosystem integrity, according to a management principle of preserving aquatic ecosystems, including living resources, and of effectively protecting them from any form of degradation on a drainage basin basis;

(b) Public health protection, a task requiring not only the provision of safe drinking-water but also the control of disease vectors in the aquatic environment;

(c) Human resources development, a key to capacity-building and a prerequisite for implementing water-quality management.

18.39. All States, according to their capacity and available resources, through bilateral or multilateral cooperation, including the United Nations and other relevant organizations as appropriate, could set the following targets:

(a) To identify the surface and groundwater resources that could be developed for use on a sustainable basis and other major developable water-dependent resources and, simultaneously, to initiate programmes for the protection, conservation and rational use of these resources on a sustainable basis;

(b) To identify all potential sources of water-supply and prepared outlines for their protection, conservation and rational use;

(c) To initiate effective water pollution prevention and control programmes, based on an appropriate mixture of pollution reduction-at-source strategies, environmental impact assessments and enforceable standards for major point-source discharges and high-risk non-point sources, commensurate with their socio-economic development;

(d) To participate, as far as appropriate, in international water-quality monitoring and management programmes such as the Global Water Quality Monitoring Programme (GEMS/WATER), the UNEP Environmentally Sound Management of Inland Waters (EMINWA), the FAO regional inland fishery bodies, and the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention);

(e) To reduce the prevalence of water-associated diseases, starting with the eradication of dracunculiasis (guinea worm disease) and onchocerciasis (river blindness) by the year 2000;

(f) To establish, according to capacities and needs, biological, health, physical and chemical quality criteria for all water bodies (surface and groundwater), with a view to an ongoing improvement of water quality;

(g) To adopt an integrated approach to environmentally sustainable management of water resources, including the protection of aquatic ecosystems and freshwater living resources;

(h) To put in place strategies for the environmentally sound management of freshwaters and related coastal ecosystems, including consideration of fisheries, aquaculture, animal grazing, agricultural activities and biodiversity.

Activities

18.40. All States, according to their capacity and available resources, and through bilateral or multilateral cooperation, including United Nations and other relevant organizations as appropriate, could implement the following activities:

(a) Water resources protection and conservation:

(i) Establishment and strengthening of technical and institutional capacities to identify and protect potential sources of water-supply within all sectors of society;

(ii) Identification of potential sources of water-supply and preparation of national profiles;

(iii) Preparation of national plans for water resources protection and conservation;

(iv) Rehabilitation of important, but degraded, catchment areas, particularly on small islands;

(v) Strengthening of administrative and legislative measures to prevent encroachment on existing and potentially usable catchment areas;

(b) Water pollution prevention and control:

(i) Application of the "polluter pays" principle, where appropriate, to all kinds of sources, including on-site and off-site sanitation;

(ii) Promotion of the construction of treatment facilities for domestic sewage and industrial effluents and the development of appropriate technologies, taking into account sound traditional and indigenous practices;

(iii) Establishment of standards for the discharge of effluents and for the receiving waters;

(iv) Introduction of the precautionary approach in water-quality management, where appropriate, with a focus on pollution minimization and prevention through use of new technologies, product and process change, pollution reduction at source and effluent reuse, recycling and recovery, treatment and environmentally safe disposal;

(v) Mandatory environmental impact assessment of all major water resource development projects potentially impairing water quality and aquatic ecosystems, combined with the delineation of appropriate remedial measures and a strengthened control of new industrial installations, solid waste landfills and infrastructure development projects;

(vi) Use of risk assessment and risk management in reaching decisions in this area and ensuring compliance with those decisions;

(vii) Identification and application of best environmental practices at reasonable cost to avoid diffuse pollution, namely, through a limited, rational and planned use of nitrogenous fertilizers and other agrochemicals (pesticides, herbicides) in agricultural practices;

(viii) Encouragement and promotion of the use of adequately treated and purified waste waters in agriculture, aquaculture, industry and other sectors;

(c) Development and application of clean technology:

(i) Control of industrial waste discharges, including low-waste production technologies and water recirculation, in an integrated manner and through application of precautionary measures derived from a broad-based life-cycle analysis;

(ii) Treatment of municipal waste water for safe reuse in agriculture and aquaculture;

(iii) Development of biotechnology, inter alia, for waste treatment, production of biofertilizers and other activities;

(iv) Development of appropriate methods for water pollution control, taking into account sound traditional and indigenous practices;

(d) Groundwater protection:

(i) Development of agricultural practices that do not degrade groundwaters;

(ii) Application of the necessary measures to mitigate saline intrusion into aquifers of small islands and coastal plains as a consequence of sealevel rise or overexploitation of coastal aquifers;

(iii) Prevention of aquifer pollution through the regulation of toxic substances that permeate the ground and the establishment of protection zones in groundwater recharge and abstraction areas;

(iv) Design and management of landfills based upon sound hydrogeologic information and impact assessment, using the best practicable and best available technology;

(v) Promotion of measures to improve the safety and integrity of wells and well-head areas to reduce intrusion of biological pathogens and hazardous chemicals into aquifers at well sites;

(vi) Water-quality monitoring, as needed, of surface and groundwaters potentially affected by sites storing toxic and hazardous materials;

(e) Protection of aquatic ecosystems:

(i) Rehabilitation of polluted and degraded water bodies to restore aquatic habitats and ecosystems;

(ii) Rehabilitation programmes for agricultural lands and for other users, taking into account equivalent action for the protection and use of groundwater resources important for agricultural productivity and for the biodiversity of the tropics;

(iii) Conservation and protection of wetlands (owing to their ecological and habitat importance for many species), taking into account social and economic factors;

(iv) Control of noxious aquatic species that may destroy some other water species;

(f) Protection of freshwater living resources:

(i) Control and monitoring of water quality to allow for the sustainable development of inland fisheries;

(ii) Protection of ecosystems from pollution and degradation for the development of freshwater aquaculture projects;

(g) Monitoring and surveillance of water resources and waters receiving wastes:

(i) Establishment of networks for the monitoring and continuous surveillance of waters receiving wastes and of point and diffuse sources of pollution;

(ii) Promotion and extension of the application of environmental impact assessments of geographical information systems;

(iii) Surveillance of pollution sources to improve compliance with standards and regulations and to regulate the issue of discharge permits;

(iv) Monitoring of the utilization of chemicals in agriculture that may have an adverse environmental effect;

(v) Rational land use to prevent land degradation, erosion and siltation of lakes and other water bodies;

(h) Development of national and international legal instruments that may be required to protect the quality of water resources, as appropriate, particularly for:

(i) Monitoring and control of pollution and its effects in national and transboundary waters;

(ii) Control of long-range atmospheric transport of pollutants;

(iii) Control of accidental and/or deliberate spills in national and/or transboundary water bodies;

(iv) Environmental impact assessment.

Means of implementation

(a) Financing and cost evaluation

18.41. The Conference secretariat has estimated the average total cost (1993-2000) of implementing the activities of this programme to be about $1 billion, including about $340 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

18.42. States should undertake cooperative research projects to develop solutions to technical problems that are appropriate for the conditions in each watershed or country. States should consider strengthening and developing national research centres linked through networks and supported by regional water research institutes. The North-South twinning of research centres and field studies by international water research institutions should be actively promoted. It is important that a minimum percentage of funds for water resource development projects is allocated to research and development, particularly in externally funded projects.

18.43. Monitoring and assessment of complex aquatic systems often require multidisciplinary studies involving several institutions and scientists in a joint programme. International water-quality programmes, such as GEMS/WATER, should be oriented towards the water-quality of developing countries. User-friendly software and Geographical Information Systems (GIS) and Global Resource Information Database (GRID) methods should be developed for the handling, analysis and interpretation of monitoring data and for the preparation of management strategies.

(c) Human resource development

18.44. Innovative approaches should be adopted for professional and managerial staff training in order to cope with changing needs and challenges. Flexibility and adaptability regarding emerging water pollution issues should be developed. Training activities should be undertaken periodically at all levels within the organizations responsible for water-quality management and innovative teaching techniques adopted for specific aspects of water-quality monitoring and control, including development of training skills, in-service training, problem-solving workshops and refresher training courses.

18.45. Suitable approaches include the strengthening and improvement of the human resource capabilities of local Governments in managing water protection, treatment and use, particularly in urban areas, and the establishment of national and regional technical and engineering courses on the subjects of water-quality protection and control at existing schools and education/training courses on water resources protection and conservation for laboratory and field technicians, women and other water-user groups.

(d) Capacity-building

18.46. The effective protection of water resources and ecosystems from pollution requires considerable upgrading of most countries' present capacities. Water-quality management programmes require a certain minimum infrastructure and staff to identify and implement technical solutions and to enforce regulatory action. One of the key problems today and for the future is the sustained operation and maintenance of these facilities. In order not to allow resources gained from previous investments to deteriorate further, immediate action is required in a number of areas.

D. Drinking-water supply and sanitation

Basis for action

18.47. Safe water-supplies and environmental sanitation are vital for protecting the environment, improving health and alleviating poverty. Safe water is also crucial to many traditional and cultural activities. An estimated 80 per cent of all diseases and over one third of deaths in developing countries are caused by the consumption of contaminated water, and on average as much as one tenth of each person's productive time is sacrificed

to water-related diseases. Concerted efforts during the 1980s brought water and sanitation services to hundreds of millions of the world's poorest people. The most outstanding of these efforts was the launching in 1981 of the International Drinking Water Supply and Sanitation Decade, which resulted from the Mar del Plata Action Plan adopted by the United Nations Water Conference in 1977. The commonly agreed premise was that "all peoples, whatever their stage of development and their social and economic conditions, have the right to have access to drinking water in quantities and of a quality equal to their basic needs". 2/ The target of the Decade was to provide safe drinking-water and sanitation to underserved urban and rural areas by 1990, but even the unprecedented progress achieved during the Decade was not enough. One in three people in the developing world still lacks these two most basic requirements for health and dignity. It is also recognized that human excreta and sewage are important causes of the deterioration of water-quality in developing countries, and the introduction of available technologies, including appropriate technologies, and the construction of sewage treatment facilities could bring significant improvement.

Objectives

18.48. The New Delhi Statement (adopted at the Global Consultation on Safe Water and Sanitation for the 1990s, which was held in New Delhi from 10 to 14 September 1990) formalized the need to provide, on a sustainable basis, access to safe water in sufficient quantities and proper sanitation for all, emphasizing the "some for all rather than more for some" approach. Four guiding principles provide for the programme objectives:

(a) Protection of the environment and safeguarding of health through the integrated management of water resources and liquid and solid wastes;

(b) Institutional reforms promoting an integrated approach and including changes in procedures, attitudes and behaviour, and the full participation of women at all levels in sector institutions;

(c) Community management of services, backed by measures to strengthen local institutions in implementing and sustaining water and sanitation programmes;

(d) Sound financial practices, achieved through better management of existing assets, and widespread use of appropriate technologies.

18.49. Past experience has shown that specific targets should be set by each individual country. At the World Summit for Children, in September 1990, heads of State or Government called for both universal access to water-supply and sanitation and the eradication of guinea worm disease by 1995. Even for the more realistic target of achieving full coverage in water-supply by 2025, it is estimated that annual investments must reach double the current levels. One realistic strategy to meet present and future needs, therefore, is to develop lower-cost but adequate services that can be implemented and sustained at the community level.

Activities

18.50. All States, according to their capacity and available resources, and through bilateral or multilateral cooperation, including the United Nations and other relevant organizations as appropriate, could implement the following activities:

(a) Environment and health:

(i) Establishment of protected areas for sources of drinking-water supply;

(ii) Sanitary disposal of excreta and sewage, using appropriate systems to treat waste waters in urban and rural areas;

(iii) Expansion of urban and rural water-supply and development and expansion of rainwater catchment systems, particularly on small islands, in addition to the reticulated water-supply system;

(iv) Building and expansion, where appropriate, of sewage treatment facilities and drainage systems;

(v) Treatment and safe reuse of domestic and industrial waste waters in urban and rural areas;

(vi) Control of water-associated diseases;

(b) People and institutions:

(i) Strengthening of the functioning of Governments in water resources management and, at the same time, giving of full recognition to the role of local authorities;

(ii) Encouragement of water development and management based on a participatory approach, involving users, planners and policy makers at all levels;

(iii) Application of the principle that decisions are to be taken at the lowest appropriate level, with public consultation and involvement of users in the planning and implementation of water projects;

(iv) Human resource development at all levels, including special programmes for women;

(v) Broad-based education programmes, with particular emphasis on hygiene, local management and risk reduction;

(vi) International support mechanisms for programme funding, implementation and follow-up;

(c) National and community management:

(i) Support and assistance to communities in managing their own systems on a sustainable basis;

(ii) Encouragement of the local population, especially women, youth, indigenous people and local communities, in water management;

(iii) Linkages between national water plans and community management of local waters;

(iv) Integration of community management of water within the context of overall planning;

(v) Promotion of primary health and environmental care at the local level, including training for local communities in appropriate water management techniques and primary health care;

(vi) Assistance to service agencies in becoming more cost-effective and responsive to consumer needs;

(vii) Providing of more attention to underserved rural and low-income periurban areas;

(viii) Rehabilitation of defective systems, reduction of wastage and safe reuse of water and waste water;

(ix) Programmes for rational water use and ensured operation and maintenance;

(x) Research and development of appropriate technical solutions;

(xi) Substantially increase urban treatment capacity commensurate with increasing loads;

(d) Awareness creation and public information/participation:

(i) Strengthening of sector monitoring and information management at subnational and national levels;

(ii) Annual processing, analysis and publication of monitoring results at national and local levels as a sector management and advocacy/awareness creation tool;

(iii) Use of limited sector indicators at regional and global levels to promote the sector and raise funds;

(iv) Improvement of sector coordination, planning and implementation, with the assistance of improved monitoring and information management, to increase the sector's absorptive capacity, particularly in community-based self-help projects.

Means of implementation

(a) Financing and cost evaluation

18.51. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $20 billion, including about $7.4 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

18.52. To ensure the feasibility, acceptability and sustainability of planned water-supply services, adopted technologies should be responsive to the needs and constraints imposed by the conditions of the community concerned. Thus, design criteria will involve technical, health, social, economic, provincial, institutional and environmental factors that determine the characteristics, magnitude and cost of the planned system. Relevant international support programmes should address the developing countries concerning, inter alia:

(a) Pursuit of low-cost scientific and technological means, as far as practicable;

(b) Utilization of traditional and indigenous practices, as far as practicable, to maximize and sustain local involvement;

(c) Assistance to country-level technical/scientific institutes to facilitate curricula development to support fields critical to the water and sanitation sector.

(c) Human resource development

18.53. To effectively plan and manage water-supply and sanitation at the national, provincial, district and community level, and to utilize funds most effectively, trained professional and technical staff must be developed within each country in sufficient numbers. To do this, countries must establish manpower development plans, taking into consideration present requirements and planned developments. Subsequently, the development and performance of country-level training institutions should be enhanced so that they can play a pivotal role in capacity-building. It is also important that countries provide adequate training for women in the sustainable maintenance of equipment, water resources management and environmental sanitation.

(d) Capacity-building

18.54. The implementation of water-supply and sanitation programmes is a national responsibility. To varying degrees, responsibility for the implementation of projects and the operating of systems should be delegated to

all administrative levels down to the community and individual served. This also means that national authorities, together with the agencies and bodies of the United Nations system and other external support agencies providing support to national programmes, should develop mechanisms and procedures to collaborate at all levels. This is particularly important if full advantage is to be taken of community-based approaches and self-reliance as tools for sustainability. This will entail a high degree of community participation, involving women, in the conception, planning, decision-making, implementation and evaluation connected with projects for domestic water-supply and sanitation.

18.55. Overall national capacity-building at all administrative levels, involving institutional development, coordination, human resources, community participation, health and hygiene education and literacy, has to be developed according to its fundamental connection both with any efforts to improve health and socio-economic development through water-supply and sanitation and with their impact on the human environment. Capacity-building should therefore be one of the underlying keys in implementation strategies. Institutional capacity-building should be considered to have an importance equal to that of the sector supplies and equipment component so that funds can be directed to both. This can be undertaken at the planning or programme/project formulation stage, accompanied by a clear definition of objectives and targets. In this regard, technical cooperation among developing countries, owing to their available wealth of information and experience and the need to avoid "reinventing the wheel", is crucial. Such a course has proved cost-effective in many country projects already.

E. Water and sustainable urban development

Basis for action

18.56. Early in the next century, more than half of the world's population will be living in urban areas. By the year 2025, that proportion will have risen to 60 per cent, comprising some 5 billion people. Rapid urban population growth and industrialization are putting severe strains on the water resources and environmental protection capabilities of many cities. Special attention needs to be given to the growing effects of urbanization on water demands and usage and to the critical role played by local and municipal authorities in managing the supply, use and overall treatment of water, particularly in developing countries for which special support is needed. Scarcity of freshwater resources and the escalating costs of developing new resources have a considerable impact on national industrial, agricultural and human settlement development and economic growth. Better management of urban water resources, including the elimination of unsustainable consumption patterns, can make a substantial contribution to the alleviation of poverty and improvement of the health and quality of life of the urban and rural poor. A high proportion of large urban agglomerations are located around estuaries and in coastal zones. Such an arrangement leads to pollution from

municipal and industrial discharges combined with overexploitation of available water resources and threatens the marine environment and the supply of freshwater resources.

Objectives

18.57. The development objective of this programme is to support local and central Governments' efforts and capacities to sustain national development and productivity through environmentally sound management of water resources for urban use. Supporting this objective is the identification and implementation of strategies and actions to ensure the continued supply of affordable water for present and future needs and to reverse current trends of resource degradation and depletion.

18.58. All States, according to their capacity and available resources, and through bilateral or multilateral cooperation, including the United Nations and other relevant organizations as appropriate, could set the following targets:

(a) By the year 2000, to have ensured that all urban residents have access to at least 40 litres per capita per day of safe water and that 75 per cent of the urban population are provided with on-site or community facilities for sanitation;

(b) By the year 2000, to have established and applied quantitative and qualitative discharge standards for municipal and industrial effluents;

(c) By the year 2000, to have ensured that 75 per cent of solid waste generated in urban areas are collected and recycled or disposed of in an environmentally safe way.

Activities

18.59. All States, according to their capacity and available resources, and through bilateral or multilateral cooperation, including the United Nations and other relevant organizations as appropriate, could implement the following activities:

(a) Protection of water resources from depletion, pollution and degradation:

(i) Introduction of sanitary waste disposal facilities based on environmentally sound low-cost and upgradable technologies;

(ii) Implementation of urban storm-water run-off and drainage programmes;

(iii) Promotion of recycling and reuse of waste water and solid wastes;

(iv) Control of industrial pollution sources to protect water resources;

(v) Protection of watersheds with respect to depletion and degradation of their forest cover and from harmful upstream activities;

(vi) Promotion of research into the contribution of forests to sustainable water resources development;

(vii) Encouragement of the best management practices for the use of agrochemicals with a view to minimizing their impact on water resources;

(b) Efficient and equitable allocation of water resources:

(i) Reconciliation of city development planning with the availability and sustainability of water resources;

(ii) Satisfaction of the basic water needs of the urban population;

(iii) Introduction of water tariffs, taking into account the circumstances in each country and where affordable, that reflect the marginal and opportunity cost of water, especially for productive activities;

(c) Institutional/legal/management reforms:

(i) Adoption of a city-wide approach to the management of water resources;

(ii) Promotion at the national and local level of the elaboration of land-use plans that give due consideration to water resources development;

(iii) Utilization of the skills and potential of non-governmental organizations, the private sector and local people, taking into account the public's and strategic interests in water resources;

(d) Promotion of public participation:

(i) Initiation of public-awareness campaigns to encourage the public's move towards rational water utilization;

(ii) Sensitization of the public to the issue of protecting water quality within the urban environment;

(iii) Promotion of public participation in the collection, recycling and elimination of wastes;

(e) Support to local capacity-building:

(i) Development of legislation and policies to promote investments in urban water and waste management, reflecting the major contribution of cities to national economic development;

(ii) Provision of seed money and technical support to the local handling of materials supply and services;

(iii) Encouragement, to the extent possible, of autonomy and financial viability of city water, solid waste and sewerage utilities;

(iv) Creation and maintenance of a cadre of professionals and semi-professionals, for water, waste-water and solid waste management;

(f) Provision of enhanced access to sanitary services:

(i) Implementation of water, sanitation and waste management programmes focused on the urban poor;

(ii) Making available of low-cost water-supply and sanitation technology choices;

(iii) Basing of choice of technology and service levels on user preferences and willingness to pay;

(iv) Mobilization and facilitation of the active involvement of women in water management teams;

(v) Encouragement and equipment of local water associations and water committees to manage community water-supply systems and communal latrines, with technical back-up available when required;

(vi) Consideration of the merits and practicality of rehabilitating existing malfunctioning systems and of correcting operation and maintenance inadequacies.

Means of implementation

(a) Financing and cost evaluation

18.60. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $20 billion, including about $4.5 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

18.61. The 1980s saw considerable progress in the development and application of low-cost water-supply and sanitation technologies. The programme envisages continuation of this work, with particular emphasis on development of

appropriate sanitation and waste disposal technologies for low-income high-density urban settlements. There should also be international information exchange, to ensure a widespread recognition among sector professionals of the availability and benefits of appropriate low-cost technologies. The public-awareness campaigns will also include components to overcome user resistance to second-class services by emphasizing the benefits of reliability and sustainability.

(c) Human resource development

18.62. Implicit in virtually all elements of this programme is the need for progressive enhancement of the training and career development of personnel at all levels in sector institutions. Specific programme activities will involve the training and retention of staff with skills in community involvement, low-cost technology, financial management, and integrated planning of urban water resources management. Special provision should be made for mobilizing and facilitating the active participation of women, youth, indigenous people and local communities in water management teams and for supporting the development of water associations and water committees, with appropriate training of such personnel as treasurers, secretaries and caretakers. Special education and training programmes for women should be launched with regard to the protection of water resources and water-quality within urban areas.

(d) Capacity-building

18.63. In combination with human resource development, strengthening of institutional, legislative and management structures are key elements of the programme. A prerequisite for progress in enhancing access to water and sanitation services is the establishment of an institutional framework that ensures that the real needs and potential contributions of currently unserved populations are reflected in urban development planning. The multisectoral approach, which is a vital part of urban water resources management, requires institutional linkages at the national and city levels, and the programme includes proposals for establishing intersectoral planning groups. Proposals for greater pollution control and prevention depend for their success on the right combination of economic and regulatory mechanisms, backed by adequate monitoring and surveillance and supported by enhanced capacity to address environmental issues on the part of local Governments.

18.64. Establishment of appropriate design standards, water-quality objectives and discharge consents is therefore among the proposed activities. The programme also includes support for strengthening the capability of water and sewerage agencies and for developing their autonomy and financial viability. Operation and maintenance of existing water and sanitation facilities have been recognized as entailing a serious shortcoming in many countries. Technical and financial support are needed to help countries correct present inadequacies and build up the capacity to operate and maintain rehabilitated and new systems.

F. Water for sustainable food production and rural development

Basis for action

18.65. Sustainability of food production increasingly depends on sound and efficient water use and conservation practices consisting primarily of irrigation development and management, including water management with respect to rain-fed areas, livestock water-supply, inland fisheries and agro-forestry. Achieving food security is a high priority in many countries, and agriculture must not only provide food for rising populations, but also save water for other uses. The challenge is to develop and apply water-saving technology and management methods and, through capacity-building, enable communities to introduce institutions and incentives for the rural population to adopt new approaches, for both rain-fed and irrigated agriculture. The rural population must also have better access to a potable water-supply and to sanitation services. It is an immense task but not an impossible one, provided appropriate policies and programmes are adopted at all levels - local, national and international. While significant expansion of the area under rain-fed agriculture has been achieved during the past decade, the productivity response and sustainability of irrigation systems have been constrained by problems of waterlogging and salinization. Financial and market constraints are also a common problem. Soil erosion, mismanagement and overexploitation of natural resources and acute competition for water have all influenced the extent of poverty, hunger and famine in the developing countries. Soil erosion caused by overgrazing of livestock is also often responsible for the siltation of lakes. Most often, the development of irrigation schemes is supported neither by environmental impact assessments identifying hydrologic consequences within watersheds of interbasin transfers, nor by the assessment of social impacts on peoples in river valleys.

18.66. The non-availability of water-supplies of suitable quality is a significant limiting factor to livestock production in many countries, and improper disposal of animal wastes can in certain circumstances result in pollution of water-supplies for both humans and animals. The drinking-water requirements of livestock vary according to species and the environment in which they are kept. It is estimated that the current global livestock drinking-water requirement is about 60 billion litres per day and based on livestock population growth estimates, this daily requirement is predicted to increase by 0.4 billion litres per annum in the foreseeable future.

18.67. Freshwater fisheries in lakes and streams are an important source of food and protein. Fisheries of inland waters should be so managed as to maximize the yield of aquatic food organisms in an environmentally sound manner. This requires the conservation of water-quality and quantity, as well as of the functional morphology of the aquatic environment. On the other hand, fishing and aquaculture may themselves damage the aquatic ecosystem; hence their development should conform to guidelines for impact limitation. Present levels of production from inland fisheries, from both fresh and brackish water, are about 7 million tons per year and could increase to 16 million tons per year by the year 2000; however, any increase in environmental stress could jeopardize this rise.

Objectives

18.68. The key strategic principles for holistic and integrated environmentally sound management of water resources in the rural context may be set forth as follows:

(a) Water should be regarded as a finite resource having an economic value with significant social and economic implications reflecting the importance of meeting basic needs;

(b) Local communities must participate in all phases of water management, ensuring the full involvement of women in view of their crucial role in the practical day-to-day supply, management and use of water;

(c) Water resource management must be developed within a comprehensive set of policies for (i) human health; (ii) food production, preservation and distribution; (iii) disaster mitigation plans; (iv) environmental protection and conservation of the natural resource base;

(d) It is necessary to recognize and actively support the role of rural populations, with particular emphasis on women.

18.69. An International Action Programme on Water and Sustainable Agricultural Development (IAP-WASAD) has been initiated by FAO in cooperation with other international organizations. The main objective of the Action Programme is to assist developing countries in planning, developing and managing water resources on an integrated basis to meet present and future needs for agricultural production, taking into account environmental considerations.

18.70. The Action Programme has developed a framework for sustainable water use in the agricultural sector and identified priority areas for action at national, regional and global levels. Quantitative targets for new irrigation development, improvement of existing irrigation schemes and reclamation of waterlogged and salinized lands through drainage for 130 developing countries are estimated on the basis of food requirements, agro-climatic zones and availability of water and land.

18.71. FAO global projections for irrigation, drainage and small-scale water programmes by the year 2000 for 130 developing countries are as follows: (a) 15.2 million hectares of new irrigation development; (b) 12 million hectares of improvement/modernization of existing schemes; (c) 7 million hectares installed with drainage and water control facilities; and (d) 10 million hectares of small-scale water programmes and conservation.

18.72. The development of new irrigation areas at the above-mentioned level may give rise to environmental concerns in so far as it implies the destruction of wetlands, water pollution, increased sedimentation and a reduction in biodiversity. Therefore, new irrigation schemes should be accompanied by an environmental impact assessment, depending upon the scale of the scheme, in case significant negative environmental impacts are expected.

When considering proposals for new irrigation schemes, consideration should also be given to a more rational exploitation, and an increase in the efficiency or productivity, of any existing schemes capable of serving the same localities. Technologies for new irrigation schemes should be thoroughly evaluated, including their potential conflicts with other land uses. The active involvement of water-users groups is a supporting objective.

18.73. It should be ensured that rural communities of all countries, according to their capacities and available resources and taking advantage of international cooperation as appropriate, will have access to safe water in sufficient quantities and adequate sanitation to meet their health needs and maintain the essential qualities of their local environments.

18.74. The objectives with regard to water management for inland fisheries and aquaculture include conservation of water-quality and water-quantity requirements for optimum production and prevention of water pollution by aquacultural activities. The Action Programme seeks to assist member countries in managing the fisheries of inland waters through the promotion of sustainable management of capture fisheries as well as the development of environmentally sound approaches to intensification of aquaculture.

18.75. The objectives with regard to water management for livestock supply are twofold: provision of adequate amounts of drinking-water and safeguarding of drinking-water quality in accordance with the specific needs of different animal species. This entails maximum salinity tolerance levels and the absence of pathogenic organisms. No global targets can be set owing to large regional and intra-country variations.

Activities

18.76. All States, according to their capacity and available resources, and through bilateral or multilateral cooperation, including the United Nations and other relevant organizations as appropriate, could implement the following activities:

(a) Water-supply and sanitation for the unserved rural poor:

(i) Establish national policies and budget priorities with regard to increasing service coverage;

(ii) Promote appropriate technologies;

(iii) Introduce suitable cost-recovery mechanisms, taking into account efficiency and equity through demand management mechanisms;

(iv) Promote community ownership and rights to water-supply and sanitation facilities;

(v) Establish monitoring and evaluation systems;

(vi) Strengthen the rural water-supply and sanitation sector with emphasis on institutional development, efficient management and an appropriate framework for financing of services;

(vii) Increase hygiene education and eliminate disease transmission foci;

(viii) Adopt appropriate technologies for water treatment;

(ix) Adopt wide-scale environmental management measures to control disease vectors;

(b) Water-use efficiency:

(i) Increase of efficiency and productivity in agricultural water use for better utilization of limited water resources;

(ii) Strengthen water and soil management research under irrigation and rain-fed conditions;

(iii) Monitor and evaluate irrigation project performance to ensure, inter alia, the optimal utilization and proper maintenance of the project;

(iv) Support water-users groups with a view to improving management performance at the local level;

(v) Support the appropriate use of relatively brackish water for irrigation;

(c) Waterlogging, salinity control and drainage:

(i) Introduce surface drainage in rain-fed agriculture to prevent temporary waterlogging and flooding of lowlands;

(ii) Introduce artificial drainage in irrigated and rain-fed agriculture;

(iii) Encourage conjunctive use of surface and groundwaters, including monitoring and water-balance studies;

(iv) Practise drainage in irrigated areas of arid and semi-arid regions;

(d) Water-quality management:

(i) Establish and operate cost-effective water-quality monitoring systems for agricultural water uses;

(ii) Prevent adverse effects of agricultural activities on water-quality for other social and economic activities and on wetlands, inter alia, through optimal use of on-farm input and the minimization of the use of external input in agricultural activities;

(iii) Establish biological, physical and chemical water-quality criteria for agricultural water-users and for marine and riverine ecosystems;

(iv) Minimize soil run-off and sedimentation;

(v) Dispose properly of sewage from human settlements and of manure produced by intensive livestock breeding;

(vi) Minimize adverse effects from agricultural chemicals by use of integrated pest management;

(vii) Educate communities about the pollution-related impacts of the use of fertilizers and chemicals on water-quality, food safety and human health;

(e) Water resources development programmes:

(i) Develop small-scale irrigation and water-supply for humans and livestock and for water and soil conservation;

(ii) Formulate large-scale and long-term irrigation development programmes, taking into account their effects on the local level, the economy and the environment;

(iii) Promote local initiatives for the integrated development and management of water resources;

(iv) Provide adequate technical advice and support and enhancement of institutional collaboration at the local community level;

(v) Promote a farming approach for land and water management that takes account of the level of education, the capacity to mobilize local communities and the ecosystem requirements of arid and semi-arid regions;

(vi) Plan and develop multi-purpose hydroelectric power schemes, making sure that environmental concerns are duly taken into account;

(f) Scarce water resources management:

(i) Develop long-term strategies and practical implementation programmes for agricultural water use under scarcity conditions with competing demands for water;

(ii) Recognize water as a social, economic and strategic good in irrigation planning and management;

(iii) Formulate specialized programmes focused on drought preparedness, with emphasis on food scarcity and environmental safeguards;

(iv) Promote and enhance waste-water reuse in agriculture;

(g) Water-supply for livestock:

(i) Improve quality of water available to livestock, taking into account their tolerance limits;

(ii) Increase the quantity of water sources available to livestock, in particular those in extensive grazing systems, in order to both reduce the distance needed to travel for water and to prevent overgrazing around water sources;

(iii) Prevent contamination of water sources with animal excrement in order to prevent the spread of diseases, in particular zoonosis;

(iv) Encourage multiple use of water-supplies through promotion of integrated agro-livestock-fishery systems;

(v) Encourage water spreading schemes for increasing water retention of extensive grasslands to stimulate forage production and prevent run-off;

(h) Inland fisheries:

(i) Develop the sustainable management of fisheries as part of national water resources planning;

(ii) Study specific aspects of the hydrobiology and environmental requirements of key inland fish species in relation to varying water regimes;

(iii) Prevent or mitigate modification of aquatic environments by other users or rehabilitate environments subjected to such modification on behalf of the sustainable use and conservation of biological diversity of living aquatic resources;

(iv) Develop and disseminate environmentally sound water resources development and management methodologies for the intensification of fish yield from inland waters;

(v) Establish and maintain adequate systems for the collection and interpretation of data on water quality and quantity and channel morphology related to the state and management of living aquatic resources, including fisheries;

(i) Aquaculture development:

(i) Develop environmentally sound aquaculture technologies that are compatible with local, regional and national water resources management plans and take into consideration social factors;

(ii) Introduce appropriate aquaculture techniques and related water development and management practices in countries not yet experienced in aquaculture;

(iii) Assess environmental impacts of aquaculture with specific reference to commercialized culture units and potential water pollution from processing centres;

(iv) Evaluate economic feasibility of aquaculture in relation to alternative use of water, taking into consideration the use of marginal-quality water and investment and operational requirements.

Means of implementation

(a) Financing and cost evaluation

18.77. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $13.2 billion, including about $4.5 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

18.78. There is an urgent need for countries to monitor water resources and water-quality, water and land use and crop production; compile inventories of type and extent of agricultural water development and of present and future contributions to sustainable agricultural development; evaluate the potential for fisheries and aquaculture development; and improve the availability and dissemination of data to planners, technicians, farmers and fishermen. Priority requirements for research are as follows:

(a) Identification of critical areas for water-related adaptive research;

(b) Strengthening of the adaptive research capacities of institutions in developing countries;

(c) Enhancement of translation of water-related farming and fishing systems research results into practical and accessible technologies and provision of the support needed for their rapid adoption at the field level.

18.79. Transfer of technology, both horizontal and vertical, needs to be strengthened. Mechanisms to provide credit, input supplies, markets, appropriate pricing and transportation must be developed jointly by countries and external support agencies. Integrated rural water-supply infrastructure, including facilities for water-related education and training and support services for agriculture, should be expanded for multiple uses and should assist in developing the rural economy.

(c) Human resource development

18.80. Education and training of human resources should be actively pursued at the national level through: (a) assessment of current and long-term human resources management and training needs; (b) establishment of a national policy for human resources development; and (c) initiation and implementation of training programmes for staff at all levels as well as for farmers. The necessary actions are as follows:

(a) Assess training needs for agricultural water management;

(b) Increase formal and informal training activities;

(c) Develop practical training courses for improving the ability of extension services to disseminate technologies and strengthen farmers' capabilities, with special reference to small-scale producers;

(d) Train staff at all levels, including farmers, fishermen and members of local communities, with particular reference to women;

(e) Increase the opportunities for career development to enhance the capabilities of administrators and officers at all levels involved in land- and water-management programmes.

(d) Capacity-building

18.81. The importance of a functional and coherent institutional framework at the national level to promote water and sustainable agricultural development has generally been fully recognized at present. In addition, an adequate legal framework of rules and regulations should be in place to facilitate actions on agricultural water-use, drainage, water-quality management, small-scale water programmes and the functioning of water-users' and fishermen's associations. Legislation specific to the needs of the agricultural water sector should be consistent with, and stem from, general legislation for the management of water resources. Actions should be pursued in the following areas:

(a) Improvement of water-use policies related to agriculture, fisheries and rural development and of legal frameworks for implementing such policies;

(b) Review, strengthening and restructuring, if required, of existing institutions in order to enhance their capacities in water-related activities, while recognizing the need to manage water resources at the lowest appropriate level;

(c) Review and strengthening, where necessary, of organizational structure, functional relationships and linkages among ministries and departments within a given ministry;

(d) Provision of specific measures that require support for institutional strengthening, inter alia, through long-term programme budgeting, staff training, incentives, mobility, equipment and coordination mechanisms;

(e) Enhancement of involvement of the private sector, where appropriate, in human resource development and provision of infrastructure;

(f) Transfer of existing and new water-use technologies by creating mechanisms for cooperation and information exchange among national and regional institutions.

G. Impacts of climate change on water resources

Basis for action

18.82. There is uncertainty with respect to the prediction of climate change at the global level. Although the uncertainties increase greatly at the regional, national and local levels, it is at the national level that the most important decisions would need to be made. Higher temperatures and decreased precipitation would lead to decreased water-supplies and increased water demands; they might cause deterioration in the quality of freshwater bodies, putting strains on the already fragile balance between supply and demand in many countries. Even where precipitation might increase, there is no guarantee that it would occur at the time of year when it could be used; in addition, there might be a likelihood of increased flooding. Any rise in sealevel will often cause the intrusion of salt water into estuaries, small islands and coastal aquifers and the flooding of low-lying coastal areas; this puts low-lying countries at great risk.

18.83. The Ministerial Declaration of the Second World Climate Conference states that "the potential impact of such climate change could pose an environmental threat of an up to now unknown magnitude ... and could even threaten survival in some small island States and in low-lying coastal, arid and semi-arid areas". 3/ The Conference recognized that among the most important impacts of climate change were its effects on the hydrologic cycle and on water management systems and, through these, on socio-economic systems. Increase in incidence of extremes, such as floods and droughts, would cause increased frequency and severity of disasters. The Conference therefore called for a strengthening of the necessary research and monitoring programmes and the exchange of relevant data and information, these actions to be undertaken at the national, regional and international levels.

Objectives

18.84. The very nature of this topic calls first and foremost for more information about and greater understanding of the threat being faced. This topic may be translated into the following objectives, consistent with the United Nations Framework Convention on Climate Change:

(a) To understand and quantify the threat of the impact of climate change on freshwater resources;

(b) To facilitate the implementation of effective national countermeasures, as and when the threatening impact is seen as sufficiently confirmed to justify such action;

(c) To study the potential impacts of climate change on areas prone to droughts and floods.

Activities

18.85. All States, according to their capacity and available resources, and through bilateral or multilateral cooperation, including the United Nations and other relevant organizations as appropriate, could implement the following activities:

(a) Monitor the hydrologic regime, including soil moisture, groundwater balance, penetration and transpiration of water-quality, and related climate factors, especially in the regions and countries most likely to suffer from the adverse effects of climate change and where the localities vulnerable to these effects should therefore be defined;

(b) Develop and apply techniques and methodologies for assessing the potential adverse effects of climate change, through changes in temperature, precipitation and sealevel rise, on freshwater resources and the flood risk;

(c) Initiate case-studies to establish whether there are linkages between climate changes and the current occurrences of droughts and floods in certain regions;

(d) Assess the resulting social, economic and environmental impacts;

(e) Develop and initiate response strategies to counter the adverse effects that are identified, including changing groundwater levels and to mitigate saline intrusion into aquifers;

(f) Develop agricultural activities based on brackish-water use;

(g) Contribute to the research activities under way within the framework of current international programmes.

Means of implementation

(a) Financing and cost evaluation

18.86. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $100 million, including about $40 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude

estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

18.87. Monitoring of climate change and its impact on freshwater bodies must be closely integrated with national and international programmes for monitoring the environment, in particular those concerned with the atmosphere, as discussed under other sections of Agenda 21, and the hydrosphere, as discussed under programme area B above. The analysis of data for indication of climate change as a basis for developing remedial measures is a complex task. Extensive research is necessary in this area and due account has to be taken of the work of the Intergovernmental Panel on Climate Change (IPCC), the World Climate Programme, the International Geosphere-Biosphere Programme (IGBP) and other relevant international programmes.

18.88. The development and implementation of response strategies requires innovative use of technological means and engineering solutions, including the installation of flood and drought warning systems and the construction of new water resource development projects such as dams, aqueducts, well fields, waste-water treatment plants, desalination works, levees, banks and drainage channels. There is also a need for coordinated research networks such as the International Geosphere-Biosphere Programme/Global Change System for Analysis, Research and Training (IGBP/START) network.

(c) Human resource development

18.89. The developmental work and innovation depend for their success on good academic training and staff motivation. International projects can help by enumerating alternatives, but each country needs to establish and implement the necessary policies and to develop its own expertise in the scientific and engineering challenges to be faced, as well as a body of dedicated individuals who are able to interpret the complex issues concerned for those required to make policy decisions. Such specialized personnel need to be trained, hired and retained in service, so that they may serve their countries in these tasks.

(d) Capacity-building

18.90. There is a need, however, to build a capacity at the national level to develop, review and implement response strategies. Construction of major engineering works and installation of forecasting systems will require significant strengthening of the agencies responsible, whether in the public or the private sector. Most critical is the requirement for a socio-economic mechanism that can review predictions of the impact of climate change and possible response strategies and make the necessary judgements and decisions.

Notes

1/ Report of the United Nations Water Conference, Mar del Plata, 14-25 March 1977 (United Nations publication, Sales No. E.77.II.A.12), part one, chap. I, sect. C, para. 35.

2/ Ibid., part one, chap. I, resolution II.

3/ A/45/696/Add.1, annex III, preamble, para. 2.

Chapter 19

ENVIRONMENTALLY SOUND MANAGEMENT OF TOXIC CHEMICALS, INCLUDING PREVENTION OF ILLEGAL INTERNATIONAL TRAFFIC IN TOXIC AND DANGEROUS PRODUCTS

INTRODUCTION

19.1. A substantial use of chemicals is essential to meet the social and economic goals of the world community and today's best practice demonstrates that they can be used widely in a cost-effective manner and with a high degree of safety. However, a great deal remains to be done to ensure the environmentally sound management of toxic chemicals, within the principles of sustainable development and improved quality of life for humankind. Two of the major problems, particularly in developing countries, are (a) lack of sufficient scientific information for the assessment of risks entailed by the use of a great number of chemicals, and (b) lack of resources for assessment of chemicals for which data are at hand.

19.2. Gross chemical contamination, with grave damage to human health, genetic structures and reproductive outcomes, and the environment, has in recent times been continuing within some of the world's most important industrial areas. Restoration will require major investment and development of new techniques. The long-range effects of pollution, extending even to the fundamental chemical and physical processes of the Earth's atmosphere and climate, are becoming understood only recently and the importance of those effects is becoming recognized only recently as well.

19.3. A considerable number of international bodies are involved in work on chemical safety. In many countries work programmes for the promotion of chemical safety are in place. Such work has international implications, as chemical risks do not respect national boundaries. However, a significant strengthening of both national and international efforts is needed to achieve an environmentally sound management of chemicals.

19.4. Six programme areas are proposed:

(a) Expanding and accelerating international assessment of chemical risks;

(b) Harmonization of classification and labelling of chemicals;

(c) Information exchange on toxic chemicals and chemical risks;

(d) Establishment of risk reduction programmes;

(e) Strengthening of national capabilities and capacities for management of chemicals;

(f) Prevention of illegal international traffic in toxic and dangerous products.

In addition, the short final subsection G deals with the enhancement of cooperation related to several programme areas.

19.5. The six programme areas are together dependent for their successful implementation on intensive international work and improved coordination of current international activities, as well as on the identification and application of technical, scientific, educational and financial means, in particular for developing countries. To varying degrees, the programme areas involve hazard assessment (based on the intrinsic properties of chemicals), risk assessment (including assessment of exposure), risk acceptability and risk management.

19.6. Collaboration on chemical safety between the United Nations Environment Programme (UNEP), the International Labour Organisation (ILO) and the World Health Organization (WHO) in the International Programme on Chemical Safety (IPCS) should be the nucleus for international cooperation on environmentally sound management of toxic chemicals. All efforts should be made to strengthen this programme. Cooperation with other programmes, such as those of the Organisation for Economic Cooperation and Development (OECD) and the European Communities (EC) and other regional and governmental chemical programmes, should be promoted.

19.7. Increased coordination of United Nations bodies and other international organizations involved in chemicals assessment and management should be further promoted. Within the framework of IPCS, an intergovernmental meeting, convened by the Executive Director of UNEP, was held in London in December 1991 to further explore this matter (see paras. 19.75 and 19.76).

19.8. The broadest possible awareness of chemical risks is a prerequisite for achieving chemical safety. The principle of the right of the community and of workers to know those risks should be recognized. However, the right to know the identity of hazardous ingredients should be balanced with industry's right to protect confidential business information. (Industry, as referred to in this chapter, shall be taken to include large industrial enterprises and transnational corporations as well as domestic industries.) The industry initiative on responsible care and product stewardship should be developed and promoted. Industry should apply adequate standards of operation in all countries in order not to damage human health and the environment.

19.9. There is international concern that part of the international movement of toxic and dangerous products is being carried out in contravention of existing national legislation and international instruments, to the detriment of the environment and public health of all countries, particularly developing countries.

19.10. In resolution 44/226 of 22 December 1989, the General Assembly requested each regional commission, within existing resources, to contribute to the prevention of the illegal traffic in toxic and dangerous products and wastes by monitoring and making regional assessments of that illegal traffic and its environmental and health implications. The Assembly also requested the regional commissions to interact among themselves and to cooperate with the United Nations Environment Programme, with a view to maintaining efficient and coordinated monitoring and assessment of the illegal traffic in toxic and dangerous products and wastes.

PROGRAMME AREAS

A. Expanding and accelerating international assessment of chemical risks

19.11. Assessing the risks to human health and the environment hazards that a chemical may cause is a prerequisite to planning for its safe and beneficial use. Among the approximately 100,000 chemical substances in commerce and the thousands of substances of natural origin with which human beings come into contact, many appear as pollutants and contaminants in food, commercial products and the various environmental media. Fortunately, exposure to most chemicals (some 1,500 cover over 95 per cent of total world production) is rather limited, as most are used in very small amounts. However, a serious problem is that even for a great number of chemicals characterized by high-volume production, crucial data for risk assessment are often lacking. Within the framework of the OECD chemicals programme such data are now being generated for a number of chemicals.

19.12. Risk assessment is resource-intensive. It could be made cost-effective by strengthening international cooperation and better coordination, thereby making the best use of available resources and avoiding unnecessary duplication of effort. However, each nation should have a critical mass of technical staff with experience in toxicity testing and exposure analysis, which are two important components of risk assessment.

Objectives

19.13. The objectives of this programme area are:

(a) To strengthen international risk assessment. Several hundred priority chemicals or groups of chemicals, including major pollutants and contaminants of global significance, should be assessed by the year 2000, using current selection and assessment criteria;

(b) To produce guidelines for acceptable exposure for a greater number of toxic chemicals, based on peer review and scientific consensus distinguishing between health- or environment-based exposure limits and those relating to socio-economic factors.

Activities

(a) Management-related activities

19.14. Governments, through the cooperation of relevant international organizations and industry, where appropriate, should:

(a) Strengthen and expand programmes on chemical risk assessment within the United Nations system IPCS (UNEP, ILO, WHO) and the Food and Agriculture Organization of the United Nations (FAO), together with other organizations, including the Organisation for Economic Cooperation and Development (OECD), based on an agreed approach to data-quality assurance, application of assessment criteria, peer review and linkages to risk management activities, taking into account the precautionary approach;

(b) Promote mechanisms to increase collaboration among Governments, industry, academia and relevant non-governmental organizations involved in the various aspects of risk assessment of chemicals and related processes, in particular the promoting and coordinating of research activities to improve understanding of the mechanisms of action of toxic chemicals;

(c) Encourage the development of procedures for the exchange by countries of their assessment reports on chemicals with other countries for use in national chemical assessment programmes.

(b) Data and information

19.15. Governments, through the cooperation of relevant international organizations and industry, where appropriate, should:

(a) Give high priority to hazard assessment of chemicals, that is, of their intrinsic properties as the appropriate basis for risk assessment;

(b) Generate data necessary for assessment, building, inter alia, on programmes of IPCS (UNEP, WHO, ILO), FAO, OECD and EC and on established programmes other regions and Governments. Industry should participate actively.

19.16. Industry should provide data for substances produced that are needed specifically for the assessment of potential risks to human health and the environment. Such data should be made available to relevant national competent authorities and international bodies and other interested parties involved in hazard and risk assessment, and to the greatest possible extent to the public also, taking into account legitimate claims of confidentiality.

(c) International and regional cooperation and coordination

19.17. Governments, through the cooperation of relevant international organizations and industry, where appropriate, should:

(a) Develop criteria for priority-setting for chemicals of global concern with respect to assessment;

(b) Review strategies for exposure assessment and environmental monitoring to allow for the best use of available resources, to ensure compatibility of data and to encourage coherent national and international strategies for that assessment.

Means of implementation

(a) Financial and cost evaluation

19.18. Most of the data and methods for chemical risk assessment are generated in the developed countries and an expansion and acceleration of the assessment work will call for a considerable increase in research and safety testing by industry and research institutions. The cost projections address the needs to strengthen the capacities of relevant United Nations bodies and are based on current experience in IPCS. It should be noted that there are considerable costs, often not possible to quantify, that are not included. These comprise costs to industry and Governments of generating the safety data underlying the assessments and costs to Governments of providing background documents and draft assessment statements to IPCS, the International Register of Potentially Toxic Chemicals (IRPTC) and OECD. They also include the cost of accelerated work in non-United Nations bodies such as OECD and EC.

19.19. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $30 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

19.20. Major research efforts should be launched in order to improve methods for assessment of chemicals as work towards a common framework for risk assessment and to improve procedures for using toxicological and epidemiological data to predict the effects of chemicals on human health and the environment, so as to enable decision makers to adopt adequate policies and measures to reduce risks posed by chemicals.

19.21. Activities include:

(a) Strengthening research on safe/safer alternatives to toxic chemicals that pose an unreasonable and otherwise unmanageable risk to the environment or human health and to those that are toxic, persistent and bio-accumulative and that cannot be adequately controlled;

(b) Promotion of research on, and validation of, methods constituting a replacement for those using test animals (thus reducing the use of animals for testing purposes);

(c) Promotion of relevant epidemiological studies with a view to establishing a cause-and-effect relationship between exposure to chemicals and the occurrence of certain diseases;

(d) Promotion of ecotoxicological studies with the aim of assessing the risks of chemicals to the environment.

(c) Human resource development

19.22. International organizations, with the participation of Governments and non-governmental organizations, should launch training and education projects involving women and children, who are at greatest risk, in order to enable countries, and particularly developing countries, to make maximum national use of international assessments of chemical risks.

(d) Capacity-building

19.23. International organizations, building on past, present and future assessment work, should support countries, particularly developing countries, in developing and strengthening risk assessment capabilities at national and regional levels to minimize, and as far as possible control and prevent, risk in the manufacturing and use of toxic and hazardous chemicals. Technical cooperation and financial support or other contributions should be given to activities aimed at expanding and accelerating the national and international assessment and control of chemical risks to enable the best choice of chemicals.

B. Harmonization of classification and labelling of chemicals

Basis for action

19.24. Adequate labelling of chemicals and the dissemination of safety data sheets such as ICSCs (International Chemical Safety Cards) and similarly written materials, based on assessed hazards to health and environment, are the simplest and most efficient way of indicating how to handle and use chemicals safely.

19.25. For the safe transport of dangerous goods, including chemicals, a comprehensive scheme elaborated within the United Nations system is in current use. This scheme mainly takes into account the acute hazards of chemicals.

19.26. Globally harmonized hazard classification and labelling systems are not yet available to promote the safe use of chemicals, inter alia, at the workplace or in the home. Classification of chemicals can be made for

different purposes and is a particularly important tool in establishing labelling systems. There is a need to develop harmonized hazard classification and labelling systems, building on ongoing work.

Objectives

19.27. A globally harmonized hazard classification and compatible labelling system, including material safety data sheets and easily understandable symbols, should be available, if feasible, by the year 2000.

Activities

(a) Management-related activities

19.28. Governments, through the cooperation of relevant international organizations and industry, where appropriate, should launch a project with a view to establishing and elaborating a harmonized classification and compatible labelling system for chemicals for use in all United Nations official languages including adequate pictograms. Such a labelling system should not lead to the imposition of unjustified trade barriers. The new system should draw on current systems to the greatest extent possible; it should be developed in steps and should address the subject of compatibility with labels of various applications.

(b) Data and information

19.29. International bodies including, inter alia, IPCS (UNEP, ILO, WHO), FAO, the International Maritime Organization (IMO), the United Nations Committee of Experts on the Transport of Dangerous Goods and OECD, in cooperation with regional and national authorities having existing classification and labelling and other information-dissemination systems, should establish a coordinating group to:

(a) Evaluate and, if appropriate, undertake studies of existing hazard classification and information systems to establish general principles for a globally harmonized system;

(b) Develop and implement a work plan for the establishment of a globally harmonized hazard classification system. The plan should include a description of the tasks to be completed, deadline for completion and assignment of tasks to the participants in the coordinating group;

(c) Elaborate a harmonized hazard classification system;

(d) Draft proposals for standardization of hazard communication terminology and symbols in order to enhance risk management of chemicals and facilitate both international trade and translation of information into the end-user's language;

(e) Elaborate a harmonized labelling system.

Means of implementation

(a) Financial and cost evaluation

19.30. The Conference secretariat has included the technical assistance costs related to this programme in estimates provided in programme area E. They estimate the average total annual cost (1993-2000) for strengthening international organizations to be about $3 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Human resource development

19.31. Governments and institutions and non-governmental organizations, with the collaboration of appropriate organizations and programmes of the United Nations, should launch training courses and information campaigns to facilitate the understanding and use of a new harmonized classification and compatible labelling system for chemicals.

(c) Capacity-building

19.32. In strengthening national capacities for management of chemicals, including development and implementation of, and adaptation to, new classification and labelling systems, the creation of trade barriers should be avoided and the limited capacities and resources of a large number of countries, particularly developing countries, for implementing such systems, should be taken into full account.

C. Information exchange on toxic chemicals and chemical risks

Basis for action

19.33. The following activities, related to information exchange on the benefits as well as the risks associated with the use of chemicals, are aimed at enhancing the sound management of toxic chemicals through the exchange of scientific, technical, economic and legal information.

19.34. The London Guidelines for the Exchange of Information on Chemicals in International Trade are a set of guidelines adopted by Governments with a view to increasing chemical safety through the exchange of information on chemicals. Special provisions have been included in the guidelines with regard to the exchange of information on banned and severely restricted chemicals.

19.35. The export to developing countries of chemicals that have been banned in producing countries or whose use has been severely restricted in some industrialized countries has been the subject of concern, as some importing countries lack the ability to ensure safe use, owing to inadequate infrastructure for controlling the importation, distribution, storage, formulation and disposal of chemicals.

19.36. In order to address this issue, provisions for Prior Informed Consent (PIC) procedures were introduced in 1989 in the London Guidelines (UNEP) and in the International Code of Conduct on the Distribution and Use of Pesticides (FAO). In addition a joint FAO/UNEP programme has been launched for the operation of the PIC procedures for chemicals, including the selection of chemicals to be included in the PIC procedure and preparation of PIC decision guidance documents. The ILO chemicals convention calls for communication between exporting and importing countries when hazardous chemicals have been prohibited for reasons of safety and health at work. Within the General Agreement on Tariffs and Trade (GATT) framework, negotiations have been pursued with a view to creating a binding instrument on products banned or severely restricted in the domestic market. Further, the GATT Council has agreed, as stated in its decision contained in C/M/251, to extend the mandate of the working group for a period of three months, to begin from the date of the group's next meeting, and has authorized the Chairman to hold consultations on timing with respect to convening this meeting.

19.37. Notwithstanding the importance of the PIC procedure, information exchange on all chemicals is necessary.

Objectives

19.38. The objectives of this programme area are:

(a) To promote intensified exchange of information on chemical safety, use and emissions among all involved parties;

(b) To achieve by the year 2000, as feasible, full participation in and implementation of the PIC procedure, including possible mandatory applications through legally binding instruments contained in the Amended London Guidelines and in the FAO International Code of Conduct, taking into account the experience gained within the PIC procedure.

Activities

(a) Management-related activities

19.39. Governments and relevant international organizations with the cooperation of industry should:

(a) Strengthen national institutions responsible for information exchange on toxic chemicals and promote the creation of national centres where these centres do not exist;

(b) Strengthen international institutions and networks, such as IRPTC, responsible for information exchange on toxic chemicals;

(c) Establish technical cooperation with, and provide information to, other countries, especially those with shortages of technical expertise, including training in the interpretation of relevant technical data, such as Environmental Health Criteria Documents, Health and Safety Guides and International Chemical Safety Cards (published by IPCS); monographs on the Evaluation of Carcinogenic Risks of Chemicals to Humans (published by the International Agency for Research on Cancer (IARC)); and decision guidance documents (provided through the FAO/UNEP joint programme on PIC), as well as those submitted by industry and other sources;

(d) Implement the PIC procedures as soon as possible and, in the light of experience gained, invite relevant international organizations, such as UNEP, GATT, FAO, WHO and others, in their respective area of competence to consider working expeditiously towards the conclusion of legally binding instruments.

(b) Data and information

19.40. Governments and relevant international organizations with the cooperation of industry should:

(a) Assist in the creation of national chemical information systems in developing countries and improve access to existing international systems;

(b) Improve databases and information systems on toxic chemicals, such as emission inventory programmes, through provision of training in the use of those systems as well as software, hardware and other facilities;

(c) Provide knowledge and information on severely restricted or banned chemicals to importing countries to enable them to judge and take decisions on whether to import, and how to handle, those chemicals and establish joint responsibilities in trade of chemicals between importing and exporting countries;

(d) Provide data necessary to assess risks to human health and the environment of possible alternatives to banned or severely restricted chemicals.

19.41. United Nations organizations should provide, as far as possible, all international information material on toxic chemicals in all United Nations official languages.

(c) International and regional cooperation and coordination

19.42. Governments and relevant international organizations with the cooperation of industry should cooperate in establishing, strengthening and expanding, as appropriate, the network of designated national authorities for

exchange of information on chemicals and establish a technical exchange programme to produce a core of trained personnel within each participating country.

Means of implementation

Financing and cost evaluation

19.43. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $10 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

D. Establishment of risk reduction programmes

Basis for action

19.44. There are often alternatives to toxic chemicals currently in use. Thus, risk reduction can sometimes be achieved by using other chemicals or even non-chemical technologies. The classic example of risk reduction is the substitution of harmless or less harmful substances for harmful ones. Establishment of pollution prevention procedures and setting standards for chemicals in each environmental medium, including food and water, and in consumer goods, constitute another example of risk reduction. In a wider context, risk reduction involves broad-based approaches to reducing the risks of toxic chemicals, taking into account the entire life cycle of the chemicals. Such approaches could encompass both regulatory and non-regulatory measures, such as promotion of the use of cleaner products and technologies, pollution prevention procedures and programmes, emission inventories, product labelling, use limitations, economic incentives, procedures for safe handling and exposure regulations, and the phasing out or banning of chemicals that pose unreasonable and otherwise unmanageable risks to human health and the environment and of those that are toxic, persistent and bio-accumulative and whose use cannot be adequately controlled.

19.45. In the agricultural area, integrated pest management, including the use of biological control agents as alternatives to toxic pesticides, is one approach to risk reduction.

19.46. Other areas of risk reduction encompass the prevention of chemical accidents, prevention of poisoning by chemicals and the undertaking of toxicovigilance and coordination of clean-up and rehabilitation of areas damaged by toxic chemicals.

19.47. The OECD Council has decided that OECD member countries should establish or strengthen national risk reduction programmes. The International Council of Chemical Associations (ICCA) has introduced initiatives regarding

responsible care and product stewardship aimed at reduction of chemical risks. The Awareness and Preparedness for Emergencies at Local Level (APELL) programme of UNEP is designed to assist decision makers and technical personnel in improving community awareness of hazardous installations and in preparing response plans. ILO has published a Code of Practice on the prevention of major industrial accidents and is preparing an international instrument on the prevention of industrial disasters for eventual adoption in 1993.

Objectives

19.48. The objective of the programme area is to eliminate unacceptable or unreasonable risks and, to the extent economically feasible, to reduce risks posed by toxic chemicals, by employing a broad-based approach involving a wide range of risk reduction options and by taking precautionary measures derived from a broad-based life-cycle analysis.

Activities

(a) Management-related activities

19.49. Governments, through the cooperation of relevant international organizations and industry, where appropriate, should:

(a) Consider adopting policies based on accepted producer liability principles, where appropriate, as well as precautionary, anticipatory and life-cycle approaches to chemical management, covering manufacturing, trade, transport, use and disposal;

(b) Undertake concerted activities to reduce risks for toxic chemicals, taking into account the entire life cycle of the chemicals. These activities could encompass both regulatory and non-regulatory measures, such as promotion of the use of cleaner products and technologies; emission inventories; product labelling; use limitations; economic incentives; and the phasing out or banning of toxic chemicals that pose an unreasonable and otherwise unmanageable risk to the environment or human health and those that are toxic, persistent and bio-accumulative and whose use cannot be adequately controlled;

(c) Adopt policies and regulatory and non-regulatory measures to identify, and minimize exposure to, toxic chemicals by replacing them with less toxic substitutes and ultimately phasing out the chemicals that pose unreasonable and otherwise unmanageable risk to human health and the environment and those that are toxic, persistent and bio-accumulative and whose use cannot be adequately controlled;

(d) Increase efforts to identify national needs for standard setting and implementation in the context of the FAO/WHO Codex Alimentarius in order to minimize adverse effects of chemicals in food;

(e) Develop national policies and adopt the necessary regulatory framework for prevention of accidents, preparedness and response, inter alia,

through land-use planning, permit systems and reporting requirements on accidents, and work with the OECD/UNEP international directory of regional response centres and the APELL programme;

(f) Promote establishment and strengthening, as appropriate, of national poison control centres to ensure prompt and adequate diagnosis and treatment of poisonings;

(g) Reduce overdependence on the use of agricultural chemicals through alternative farming practices, integrated pest management and other appropriate means;

(h) Require manufacturers, importers and others handling toxic chemicals to develop, with the cooperation of producers of such chemicals, where applicable, emergency response procedures and preparation of on-site and off-site emergency response plans;

(i) Identify, assess, reduce and minimize, or eliminate as far as feasible by environmentally sound disposal practices, risks from storage of outdated chemicals.

19.50. Industry should be encouraged to:

(a) Develop an internationally agreed upon code of principles for the management of trade in chemicals, recognizing in particular the responsibility for making available information on potential risks and environmentally sound disposal practices if those chemicals become wastes, in cooperation with Governments and relevant international organizations and appropriate agencies of the United Nations system;

(b) Develop application of a "responsible care" approach by producers and manufacturers towards chemical products, taking into account the total life cycle of such products;

(c) Adopt, on a voluntary basis, community right-to-know programmes based on international guidelines, including sharing of information on causes of accidental and potential releases and means of preventing them, and reporting on annual routine emissions of toxic chemicals to the environment in the absence of host country requirements.

(b) Data and information

19.51. Governments, through the cooperation of relevant international organizations and industry, where appropriate, should:

(a) Promote exchange of information on national and regional activities to reduce the risks of toxic chemicals;

(b) Cooperate in the development of communication guidelines on chemical risks at the national level to promote information exchange with the public and the understanding of risks.

(c) International and regional cooperation and coordination

19.52. Governments, through the cooperation of relevant international organizations and industry, where appropriate, should:

(a) Collaborate to develop common criteria to determine which chemicals are suitable candidates for concerted risk reduction activities;

(b) Coordinate concerted risk reduction activities;

(c) Develop guidelines and policies for the disclosure by manufacturers, importers and others using toxic chemicals of toxicity information declaring risks and emergency response arrangements;

(d) Encourage large industrial enterprises including transnational corporations and other enterprises wherever they operate to introduce policies demonstrating the commitment, with reference to the environmentally sound management of toxic chemicals, to adopt standards of operation equivalent to or not less stringent than those existing in the country of origin;

(e) Encourage and support the development and adoption by small- and medium-sized industries of relevant procedures for risk reduction in their activities;

(f) Develop regulatory and non-regulatory measures and procedures aimed at preventing the export of chemicals that are banned, severely restricted, withdrawn or not approved for health or environmental reasons, except when such export has received prior written consent from the importing country or is otherwise in accordance with the PIC procedure;

(g) Encourage national and regional work to harmonize evaluation of pesticides;

(h) Promote and develop mechanisms for the safe production, management and use of dangerous materials, formulating programmes to substitute for them safer alternatives, where appropriate;

(i) Formalize networks of emergency response centres;

(j) Encourage industry, with the help of multilateral cooperation, to phase out as appropriate, and dispose of, any banned chemicals that are still in stock or in use in an environmentally sound manner, including safe reuse, where approved and appropriate.

Means of implementation

(a) Financial and cost evaluation

19.53. The Conference secretariat has included most costs related to this programme in estimates provided for programme areas A and E. They estimate

other requirements for training and strengthening the emergency and poison control centres to be about $4 million annually from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

19.54. Governments, in cooperation with relevant international organizations and programmes, should:

(a) Promote technology that would minimize release of, and exposure to, toxic chemicals in all countries;

(b) Carry out national reviews, as appropriate, of previously accepted pesticides whose acceptance was based on criteria now recognized as insufficient or outdated and of their possible replacement with other pest control methods, particularly in the case of pesticides that are toxic, persistent and/or bio-accumulative.

E. Strengthening of national capabilities and capacities for management of chemicals

Basis for action

19.55. Many countries lack national systems to cope with chemical risks. Most countries lack scientific means of collecting evidence of misuse and of judging the impact of toxic chemicals on the environment, because of the difficulties involved in the detection of many problematic chemicals and systematically tracking their flow. Significant new uses are among the potential hazards to human health and the environment in developing countries. In several countries with systems in place there is an urgent need to make those systems more efficient.

19.56. Basic elements for sound management of chemicals are: (a) adequate legislation, (b) information gathering and dissemination, (c) capacity for risk assessment and interpretation, (d) establishment of risk management policy, (e) capacity for implementation and enforcement, (f) capacity for rehabilitation of contaminated sites and poisoned persons, (g) effective education programmes and (h) capacity to respond to emergencies.

19.57. As management of chemicals takes place within a number of sectors related to various national ministries, experience suggests that a coordinating mechanism is essential.

Objective

19.58. By the year 2000, national systems for environmentally sound management of chemicals, including legislation and provisions for implementation and enforcement, should be in place in all countries to the extent possible.

Activities

(a) Management-related activities

19.59. Governments, where appropriate and with the collaboration of relevant intergovernmental organizations, agencies and programmes of the United Nations system, should:

(a) Promote and support multidisciplinary approaches to chemical safety problems;

(b) Consider the need to establish and strengthen, where appropriate, a national coordinating mechanism to provide a liaison for all parties involved in chemical safety activities (for example, agriculture, environment, education, industry, labour, health, transportation, police, civil defence, economic affairs, research institutions, and poison control centres);

(c) Develop institutional mechanisms for the management of chemicals, including effective means of enforcement;

(d) Establish and develop or strengthen, where appropriate, networks of emergency response centres, including poison control centres;

(e) Develop national and local capabilities to prepare for and respond to accidents by taking into account the UNEP APELL programme and similar programmes on accident prevention, preparedness and response, where appropriate, including regularly tested and updated emergency plans;

(f) Develop, in cooperation with industry, emergency response procedures, identifying means and equipment in industries and plants necessary to reduce impacts of accidents.

(b) Data and information

19.60. Governments should:

(a) Direct information campaigns such as programmes providing information about chemical stockpiles, environmentally safer alternatives and emission inventories that could also be a tool for risk reduction to the general public to increase the awareness of problems of chemical safety;

(b) Establish, in conjunction with IRPTC, national registers and databases, including safety information, for chemicals;

(c) Generate field monitoring data for toxic chemicals of high environmental importance;

(d) Cooperate with international organizations, where appropriate, to effectively monitor and control the generation, manufacturing, distribution, transportation and disposal activities relating to toxic chemicals, to foster preventive and precautionary approaches and ensure compliance with safety management rules, and provide accurate reporting of relevant data.

(c) International and regional cooperation and coordination

19.61. Governments, with the cooperation of international organizations, where appropriate, should:

(a) Prepare guidelines, where not already available, with advice and check-lists for enacting legislation in the chemical safety field;

(b) Support countries, particularly developing countries, in developing and further strengthening national legislation and its implementation;

(c) Consider adoption of community right-to-know or other public information-dissemination programmes, when appropriate, as possible risk reduction tools. Appropriate international organizations, in particular UNEP, OECD, the Economic Commission for Europe (ECE) and other interested parties, should consider the possibility of developing a guidance document on the establishment of such programmes for use by interested Governments. The document should build on existing work on accidents and include new guidance on toxic emission inventories and risk communication. Such guidance should include harmonization of requirements, definitions and data elements to promote uniformity and allow sharing of data internationally;

(d) Build on past, present and future risk assessment work at an international level, to support countries, particularly developing countries, in developing and strengthening risk assessment capabilities at national and regional levels to minimize risk in the manufacturing and use of toxic chemicals;

(e) Promote implementation of UNEP's APELL programme and, in particular, use of an OECD/UNEP international directory of emergency response centres;

(f) Cooperate with all countries, particularly developing countries, in the setting up of an institutional mechanism at the national level and the development of appropriate tools for management of chemicals;

(g) Arrange information courses at all levels of production and use, aimed at staff working on chemical safety issues;

(h) Develop mechanisms to make maximum use in countries of internationally available information;

(i) Invite UNEP to promote principles for accident prevention, preparedness and response for Governments, industry and the public, building on ILO, OECD and ECE work in this area.

Means of implementation

(a) Financing and cost evaluation

19.62. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme in developing countries to be about $600 million, including $150 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

19.63. International organizations should:

(a) Promote the establishment and strengthening of national laboratories to ensure the availability of adequate national control in all countries regarding the importation, manufacture and use of chemicals;

(b) Promote translation, where feasible, of internationally prepared documents on chemical safety into local languages and support various levels of regional activities related to technology transfer and information exchange.

(c) Human resource development

19.64. International organizations should:

(a) Enhance technical training for developing countries in relation to risk management of chemicals;

(b) Promote and increase support for research activities at the local level by providing grants and fellowships for studies at recognized research institutions active in disciplines of importance for chemical safety programmes.

19.65. Governments should organize, in collaboration with industry and trade unions, training programmes in the management of chemicals, including emergency response, targeted at all levels. In all countries basic elements of chemical safety principles should be included in the primary education curricula.

F. Prevention of illegal international traffic in toxic and dangerous products

19.66. There is currently no global international agreement on traffic in toxic and dangerous products (toxic and dangerous products are those that are banned, severely restricted, withdrawn or not approved for use or sale by Governments in order to protect public health and the environment). However, there is international concern that illegal international traffic in these products is detrimental to public health and the environment, particularly in developing countries, as acknowledged by the General Assembly in resolutions 42/183 and 44/226. Illegal traffic refers to traffic that is carried out in contravention of a country's laws or relevant international legal instruments. The concern also relates to transboundary movements of those products that are not carried out in accordance with applicable internationally adopted guidelines and principles. Activities under this programme area are intended to improve detection and prevention of the traffic concerned.

19.67. Further strengthening of international and regional cooperation is needed to prevent illegal transboundary movement of toxic and dangerous products. Furthermore, capacity-building at the national level is needed to improve monitoring and enforcement capabilities involving recognition of the fact that appropriate penalties may need to be imposed under an effective enforcement programme. Other activities envisaged in the present chapter (for example, under paragraph 19.39 (d)) will also contribute to achieving these objectives.

Objectives

19.68. The objectives of the programme are:

(a) To reinforce national capacities to detect and halt any illegal attempt to introduce toxic and dangerous products into the territory of any State, in contravention of national legislation and relevant international legal instruments;

(b) To assist all countries, particularly developing countries, in obtaining all appropriate information concerning illegal traffic in toxic and dangerous products.

Activities

(a) Management-related activities

19.69. Governments, according to their capacities and available resources and with the cooperation of the United Nations and other relevant organizations, as appropriate, should:

(a) Adopt, where necessary, and implement legislation to prevent the illegal import and export of toxic and dangerous products;

(b) Develop appropriate national enforcement programmes to monitor compliance with such legislation, and detect and deter violations through appropriate penalties.

(b) Data and information

19.70. Governments should develop, as appropriate, national alert systems to assist in detecting illegal traffic in toxic and dangerous products; local communities, and others could be involved in the operation of such a system.

19.71. Governments should cooperate in the exchange of information on illegal transboundary movements of toxic and dangerous products and should make such information available to appropriate United Nations bodies, such as UNEP and the regional commissions.

(c) International and regional cooperation and coordination

19.72. Further strengthening of international and regional cooperation is needed to prevent illegal transboundary movement of toxic and dangerous products.

19.73. The regional commissions, in cooperation with and relying upon expert support and advice from UNEP and other relevant bodies of the United Nations, should monitor, on the basis of data and information provided by Governments, and on a continuous basis make regional assessments of, the illegal traffic in toxic and dangerous products and its environmental, economic and health implications, in each region, drawing upon the results and experience gained in the joint UNEP/ESCAP preliminary assessment of illegal traffic, expected to be completed in August 1992.

19.74. Governments and international organizations, as appropriate, should cooperate with developing countries in strengthening their institutional and regulatory capacities in order to prevent illegal import and export of toxic and dangerous products.

G. Enhancement of international cooperation relating to several of the programme areas

19.75. A meeting of government-designated experts, held in London in December 1991, made recommendations for increased coordination among United Nations bodies and other international organizations involved in chemical risk assessment and management. That meeting called for the taking of appropriate measures to enhance the role of IPCS and establish an intergovernmental forum on chemical risk assessment and management.

19.76. To further consider the recommendations of the London meeting and initiate action on them, as appropriate, the Executive Heads of WHO, ILO and UNEP are invited to convene an intergovernmental meeting within one year, which could constitute the first meeting of the intergovernmental forum.

Chapter 20

ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS WASTES, INCLUDING PREVENTION OF ILLEGAL INTERNATIONAL TRAFFIC IN HAZARDOUS WASTES

INTRODUCTION

20.1. Effective control of the generation, storage, treatment, recycling and reuse, transport, recovery and disposal of hazardous wastes is of paramount importance for proper health, environmental protection and natural resource management, and sustainable development. This will require the active cooperation and participation of the international community, Governments and industry. Industry, as referred to in this paper, shall include large industrial enterprises, including transnational corporations and domestic industry.

20.2. Prevention of the generation of hazardous wastes and the rehabilitation of contaminated sites are the key elements, and both require knowledge, experienced people, facilities, financial resources and technical and scientific capacities.

20.3. The activities outlined in the present chapter are very closely related to, and have implications for, many of the programme areas described in other chapters, so that an overall integrated approach to hazardous waste management is necessary.

20.4. There is international concern that part of the international movement of hazardous wastes is being carried out in contravention of existing national legislation and international instruments to the detriment of the environment and public health of all countries, particularly developing countries.

20.5. In section I of resolution 44/226 of 22 December 1989, the General Assembly requested each regional commission, within existing resources, to contribute to the prevention of the illegal traffic in toxic and dangerous products and wastes by monitoring and making regional assessments of that illegal traffic and its environmental and health implications. The Assembly also requested the regional commissions to interact among themselves and cooperate with the United Nations Environment Programme (UNEP), with a view to maintaining efficient and coordinated monitoring and assessment of the illegal traffic in toxic and dangerous products and wastes.

Overall objective

20.6. Within the framework of integrated life-cycle management, the overall objective is to prevent to the extent possible, and minimize, the generation of hazardous wastes, as well as to manage those wastes in such a way that they do not cause harm to health and the environment.

Overall targets

20.7. The overall targets are:

(a) Preventing or minimizing the generation of hazardous wastes as part of an overall integrated cleaner production approach; eliminating or reducing to a minimum transboundary movements of hazardous wastes, consistent with the environmentally sound and efficient management of those wastes; and ensuring that environmentally sound hazardous waste management options are pursued to the maximum extent possible within the country of origin (the self-sufficiency principle). The transboundary movements that take place should be on environmental and economic grounds and based upon agreements between the States concerned;

(b) Ratification of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal and the expeditious elaboration of related protocols, such as the protocol on liability and compensation, mechanisms and guidelines to facilitate the implementation of the Basel Convention;

(c) Ratification and full implementation by the countries concerned of the Bamako Convention on the Ban on the Import into Africa and the Control of Transboundary Movement of Hazardous Wastes within Africa and the expeditious elaboration of a protocol on liability and compensation;

(d) Elimination of the export of hazardous wastes to countries that, individually or through international agreements, prohibits the import of such wastes, such as, the contracting parties to the Bamako Convention, the fourth Lomé Convention or other relevant conventions, where such prohibition is provided for.

20.8. The following programme areas are included in this chapter:

(a) Promoting the prevention and minimization of hazardous waste;

(b) Promoting and strengthening institutional capacities in hazardous waste management;

(c) Promoting and strengthening international cooperation in the management of transboundary movements of hazardous wastes;

(d) Preventing illegal international traffic in hazardous wastes.

A. Promoting the prevention and minimization of hazardous waste

Basis for action

20.9. Human health and environmental quality are undergoing continuous degradation by the increasing amount of hazardous wastes being produced. There are increasing direct and indirect costs to society and to individual citizens in connection with the generation, handling and disposal of such wastes. It is therefore crucial to enhance knowledge and information on the economics of prevention and management of hazardous wastes, including the impact in relation to the employment and environmental benefits, in order to ensure that the necessary capital investment is made available in development programmes through economic incentives. One of the first priorities in hazardous waste management is minimization, as part of a broader approach to changing industrial processes and consumer patterns through pollution prevention and cleaner production strategies.

20.10. Among the most important factors in these strategies is the recovery of hazardous wastes and their tranformation into useful material. Technology application, modification and development of new low-waste technologies are therefore currently a central focus of hazardous waste minimization.

Objectives

20.11. The objectives of this programme area are:

(a) To reduce the generation of hazardous wastes, to the extent feasible, as part of an integrated cleaner production approach;

(b) To optimize the use of materials by utilizing, where practicable and environmentally sound, the residues from production processes;

(c) To enhance knowledge and information on the economics of prevention and management of hazardous wastes.

20.12. To achieve those objectives, and thereby reduce the impact and cost of industrial development, countries that can afford to adopt the requisite technologies without detriment to their development should establish policies that include:

(a) Integration of cleaner production approaches and hazardous waste minimization in all planning, and the adoption of specific goals;

(b) Promotion of the use of regulatory and market mechanisms;

(c) Establishment of an intermediate goal for the stabilization of the quantity of hazardous waste generated;

(d) Establishment of long-term programmes and policies including targets where appropriate for reducing the amount of hazardous waste produced per unit of manufacture;

(e) Achievement of a qualitative improvement of waste streams, mainly through activities aimed at reducing their hazardous characteristics;

(f) Facilitation of the establishment of cost-effective policies and approaches to hazardous waste prevention and management, taking into consideration the state of development of each country.

Activities

(a) Management-related activities

20.13. The following activities should be undertaken:

(a) Governments should establish or modify standards or purchasing specifications to avoid discrimination against recycled materials, provided that those materials are environmentally sound;

(b) Governments, according to their possibilities and with the help of multilateral cooperation, should provide economic or regulatory incentives, where appropriate, to stimulate industrial innovation towards cleaner production methods, to encourage industry to invest in preventive and/or recycling technologies so as to ensure environmentally sound management of all hazardous wastes, including recyclable wastes, and to encourage waste minimization investments;

(c) Governments should intensify research and development activities on cost-effective alternatives for processes and substances that currently result in the generation of hazardous wastes that pose particular problems for environmentally sound disposal or treatment, the possibility of ultimate phase-out of those substances that present an unreasonable or otherwise unmanageable risk and are toxic, persistent and bio-accumulative to be considered as soon as practicable. Emphasis should be given to alternatives that could be economically accessible to developing countries;

(d) Governments, according to their capacities and available resources and with the cooperation of the United Nations and other relevant organizations and industries, as appropriate, should support the establishment of domestic facilities to handle hazardous wastes of domestic origin;

(e) Governments of developed countries should promote the transfer of environmentally sound technologies and know-how on clean technologies and low-waste production to developing countries in conformity with chapter 34, which will bring about changes to sustain innovation. Governments should cooperate with industry to develop guidelines and codes of conduct, where appropriate, leading to cleaner production through sectoral trade industry associations;

(f) Governments should encourage industry to treat, recycle, reuse and dispose of wastes at the source of generation, or as close as possible thereto, whenever hazardous waste generation is unavoidable and when it is both economically and environmentally efficient for industry to do so;

(g) Governments should encourage technology assessments, for example through the use of technology assessment centres;

(h) Governments should promote cleaner production through the establishment of centres providing training and information on environmentally sound technologies;

(i) Industry should establish environmental management systems, including environmental auditing of its production or distribution sites, in order to identify where the installation of cleaner production methods is needed;

(j) A relevant and competent United Nations organization should take the lead, in cooperation with other organizations, to develop guidelines for estimating the costs and benefits of various approaches to the adoption of cleaner production and waste minimization and environmentally sound management of hazardous wastes, including rehabilitation of contaminated sites, taking into account, where appropriate, the report of the 1991 Nairobi meeting of government-designated experts on an international strategy and an action programme, including technical guidelines for the environmentally sound management of hazardous wastes; in particular in the context of the work of the Basel Convention, being developed under the UNEP secretariat;

(k) Governments should establish regulations that lay down the ultimate responsibility of industries for environmentally sound disposal of the hazardous wastes their activities generate.

(b) Data and information

20.14. The following activities should be undertaken:

(a) Governments, assisted by international organizations, should establish mechanisms for assessing the value of existing information systems;

(b) Governments should establish nationwide and regional information collection and dissemination clearing-houses and networks that are easy for Government institutions and industry and other non-governmental organizations to access and use;

(c) International organizations, through the UNEP Cleaner Production programme and ICPIC, should extend and strengthen existing systems for collection of cleaner production information;

(d) All United Nations organs and organizations should promote the use and dissemination of information collected through the Cleaner Production network;

(e) OECD should, in cooperation with other organizations, undertake a comprehensive survey of, and disseminate information on, experiences of member countries in adopting economic regulatory schemes and incentive mechanisms for hazardous waste management and for the use of clean technologies that prevent such waste from being generated;

(f) Governments should encourage industries to be transparent in their operations and provide relevant information to the communities that might be affected by the generation, management and disposal of hazardous wastes.

(c) International and regional cooperation and coordination

20.15. International/regional cooperation should encourage the ratification by States of the Basel and Bamako Conventions and promote the implementation of those Conventions. Regional cooperation will be necessary for the development of similar conventions in regions other than Africa, if so required. In addition there is a need for effective coordination of international regional and national policies and instruments. Another activity proposed is cooperating in monitoring the effects of the management of hazardous wastes.

Means of implementation

(a) Financing and cost evaluation

20.16. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $750 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

20.17. The following activities related to technology development and research should be undertaken:

(a) Governments, according to their capacities and available resources and with the cooperation of the United Nations and other relevant organizations, and industries, as appropriate, should significantly increase financial support for cleaner technology research and development programmes, including the use of biotechnologies;

(b) States, with the cooperation of international organizations where appropriate, should encourage industry to promote and undertake research into the phase-out of the processes that pose the greatest environmental risk based on hazardous wastes generated;

(c) States should encourage industry to develop schemes to integrate the cleaner production approach into design of products and management practices;

(d) States should encourage industry to exercise environmentally responsible care through hazardous waste reduction and by ensuring the environmentally sound reuse, recycling and recovery of hazardous wastes, as well as their final disposal.

(c) Human resource development

20.18. The following activities should be undertaken:

(a) Governments, international organizations and industry should encourage industrial training programmes, incorporating hazardous waste prevention and minimization techniques and launching demonstration projects at the local level to develop "success stories" in cleaner production;

(b) Industry should integrate cleaner production principles and case examples into training programmes and establish demonstration projects/networks by sector/country;

(c) All sectors of society should develop cleaner production awareness campaigns and promote dialogue and partnership with industry and other actors.

(d) Capacity-building

20.19. The following activities should be undertaken:

(a) Governments of developing countries, in cooperation with industry and with the cooperation of appropriate international organizations, should develop inventories of hazardous waste production, in order to identify their needs with respect to technology transfer and implementation of measures for the sound management of hazardous wastes and their disposal;

(b) Governments should include in national planning and legislation an integrated approach to environmental protection, driven by prevention and source reduction criteria, taking into account the "polluter pays" principle, and adopt programmes for hazardous waste reduction, including targets and adequate environmental control;

(c) Governments should work with industry on sector-by-sector cleaner production and hazardous waste minimization campaigns, as well as on the reduction of such wastes and other emissions;

(d) Governments should take the lead in establishing and strengthening, as appropriate, national procedures for environmental impact assessment, taking into acount the cradle-to-grave approach to the management of hazardous wastes, in order to identify options for minimizing the generation of hazardous wastes, through safer handling, storage, disposal and destruction;

(e) Governments, in collaboration with industry and appropriate international organizations, should develop procedures for monitoring the application of the cradle to grave approach, including environmental audits;

(f) Bilateral and multilateral development assistance agencies should substantially increase funding for cleaner technology transfer to developing countries, including small- and medium-sized enterprises.

B. Promoting and strengthening institutional capacities in hazardous waste management

Basis for action

20.20. Many countries lack the national capacity to handle and manage hazardous wastes. This is primarily due to inadequate infrastructure, deficiencies in regulatory frameworks, insufficient education and training programmes and lack of coordination between the different ministries and institutions involved in various aspects of waste management. In addition, there is a lack of knowledge about environmental contamination and pollution and the associated health risk from the exposure of populations, especially women and children, and ecosystems to hazardous wastes; assessment of risks; and the characteristics of wastes. Steps need to be taken immediately to identify populations at high risk and to take remedial measures, where necessary. One of the main priorities in ensuring environmentally sound management of hazardous wastes is to provide awareness, education and training programmes covering all levels of society. There is also a need to undertake research programmes to understand the nature of hazardous wastes, to identify their potential environmental effects and to develop technologies to safely handle those wastes. Finally, there is a need to strengthen the capacities of institutions that are responsible for the management of hazardous wastes.

Objectives

20.21. The objectives in this programme area are:

(a) To adopt appropriate coordinating, legislative and regulatory measures at the national level for the environmentally sound management of hazardous wastes, including the implementation of international and regional conventions;

(b) To establish public awareness and information programmes on hazardous waste issues and to ensure that basic education and training programmes are provided for industry and government workers in all countries;

(c) To establish comprehensive research programmes on hazardous wastes in countries;

(d) To strengthen service industries to enable them to handle hazardous wastes, and to build up international networking;

(e) To develop endogenous capacities in all developing countries to educate and train staff at all levels in environmentally sound hazardous waste handling and monitoring and in environmentally sound management;

(f) To promote human exposure assessment with respect to hazardous waste sites and identify the remedial measures required;

(g) To facilitate the assessment of impacts and risks of hazardous wastes on human health and the environment by establishing appropriate procedures, methodologies, criteria and/or effluent-related guidelines and standards;

(h) To improve knowledge regarding the effects of hazardous wastes on human health and the environment;

(i) To make information available to Governments and to the general public on the effects of hazardous wastes, including infectious wastes, on human health and the environment.

Activities

a) Management-related activities

20.22. The following activities should be undertaken:

(a) Governments should establish and maintain inventories, including computerized inventories, of hazardous wastes and their treatment/disposal sites, as well as of contaminated sites that require rehabilitation, and assess exposure and risk to human health and the environment; they should also identify the measures required to clean up the disposal sites. Industry should make the necessary information available;

(b) Governments, industry and international organizations should collaborate in developing guidelines and easy-to-implement methods for the characterization and classification of hazardous wastes;

(c) Governments should carry out exposure and health assessments of populations residing near uncontrolled hazardous waste sites and initiate remedial measures;

(d) International organizations should develop improved health-based criteria, taking into account national decision-making processes, and assist in the preparation of practical technical guidelines for the prevention, minimization and safe handling and disposal of hazardous wastes;

(e) Governments of developing countries should encourage interdisciplinary and intersectoral groups, in cooperation with international organizations and agencies, to implement training and research activities related to evaluation, prevention and control of hazardous waste health risks. Such groups should serve as models to develop similar regional programmes;

(f) Governments, according to their capacities and available resources and with the cooperation of the United Nations and other relevant organizations as appropriate, should encourage as far as possible the establishment of combined treatment/disposal facilities for hazardous wastes in small- and medium-sized industries;

(g) Governments should promote identification and clean-up of sites of hazardous wastes in collaboration with industry and international organizations. Technologies, expertise and financing should be available for this purpose, as far as possible and when appropriate with the application of the "polluter pays" principle;

(h) Governments should ascertain that their military establishments conform to their nationally applicable environmental norms in the treatment and disposal of hazardous wastes.

(b) Data and information

20.23. The following activities should be undertaken:

(a) Governments, international and regional organizations and industry should facilitate and expand the dissemination of technical and scientific information dealing with the various health aspects of hazardous wastes, and promote its application;

(b) Governments should establish notification systems and registries of exposed populations and of adverse health effects and databases on risk assessments of hazardous wastes;

(c) Governments should endeavour to collect information on those who generate or dispose/recycle hazardous wastes and provide such information to the individuals and institutions concerned.

(c) International and regional cooperation and coordination

20.24. Governments, according to their capacities and available resources and with the cooperation of the United Nations and other relevant organizations, as appropriate, should:

(a) Promote and support the integration and operation, at the regional and local levels as appropriate, of institutional and interdisciplinary groups that collaborate, according to their capabilities, in activities oriented towards strengthening risk assessment, risk management and risk reduction with respect to hazardous wastes;

(b) Support capacity-building and technological development and research in developing countries in connection with human resource development, with particular support to be given to consolidating networks;

(c) Encourage self-sufficiency in hazardous waste disposal in the country of origin to the extent environmentally sound and feasible. The transboundary movements that take place should be on environmental and economic grounds and based upon agreements between all States concerned.

Means of implementation

(a) Financing and cost evaluation

20.25. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $18.5 billion on a global basis with about $3.5 billion related to developing countries, including about $500 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

20.26. The following activities should be undertaken:

(a) Governments, according to their capacities and available resources and with the cooperation of the United Nations and other relevant organizations and industry as appropriate, should increase support for hazardous waste research management in developing countries;

(b) Governments, in collaboration with international organizations, should conduct research on the health effects of hazardous wastes in developing countries, including the long-term effects on children and women;

(c) Governments should conduct research aimed at the needs of small and medium-sized industries;

(d) Governments and international organizations in cooperation with industry should expand technological research on environmentally sound hazardous waste handling, storage, transport, treatment and disposal and on hazardous waste assessment, management and remediation;

(e) International organizations should identify relevant and improved technologies for handling, storage, treatment and disposal of hazardous wastes.

(c) Human resource development

20.27. Governments, according to their capacities and available resources and with the cooperation of the United Nations and other relevant organizations and industry as appropriate, should:

(a) Increase public awareness and information on hazardous waste issues and promote the development and dissemination of hazardous wastes information that the general public can understand;

(b) Increase participation in hazardous waste management programmes by the general public, particularly women, including participation at grass-roots levels;

(c) Develop training and education programmes for men and women in industry and Government aimed at specific real-life problems, for example, planning and implementing hazardous waste minimization programmes, conducting hazardous materials audits and establishing appropriate regulatory programmes;

(d) Promote the training of labour, industrial management and government regulatory staff in developing countries on technologies to minimize and manage hazardous wastes in an environmentally sound manner.

20.28. The following activities should also be undertaken:

(a) Governments, according to their capacities and available resources and with the cooperation of the United Nations, other organizations and non-governmental organizations, should collaborate in developing and disseminating educational materials concerning hazardous wastes and their effects on environment and human health, for use in schools, by women's groups and by the general public;

(b) Governments, according to their capacities and available resources and with the cooperation of the United Nations and other organizations, should establish or strengthen programmes for the environmentally sound management of hazardous wastes in accordance with, as appropriate, health and environmental standards, and extend surveillance systems for the purpose of identifying adverse effects on populations and the environment of exposure to hazardous wastes;

(c) International organizations should provide assistance to member States in assessing the health and environmental risks resulting from exposure to hazardous wastes, and in identifying their priorities for controlling the various categories or classes of wastes;

(d) Governments, according to their capacities and available resources and with the cooperation of the United Nations and other relevant organizations, should promote centres of excellence for training in hazardous waste management, building on appropriate national institutions and encouraging international cooperation, inter alia, through institutional links between developed and developing countries.

(d) Capacity-building

20.29. Wherever they operate, transnational corporations and other large-scale enterprises should be encouraged to introduce policies and make commitments to adopt standards of operation with reference to hazardous waste

generation and disposal that are equivalent to or no less stringent than standards in the country of origin, and Governments are invited to make efforts to establish regulations requiring environmentally sound management of hazardous wastes.

20.30. International organizations should provide assistance to member States in assessing the health and environmental risks resulting from exposure to hazardous wastes and in identifying their priorities for controlling the various categories or classes of wastes.

20.31. Governments, according to their capacities and available resources and with the cooperation of the United Nations and other relevant organizations and industries, should:

(a) Support national institutions in dealing with hazardous wastes from the regulatory monitoring and enforcement perspectives, with such support including enabling of those institutions to implement international conventions;

(b) Develop industry-based institutions for dealing with hazardous wastes and service industries for handling hazardous wastes;

(c) Adopt technical guidelines for the environmentally sound management of hazardous wastes and support the implementation of regional and international conventions;

(d) Develop and expand international networking among professionals working in the area of hazardous wastes and maintain an information flow among countries;

(e) Assess the feasibility of establishing and operating national, subregional and regional hazardous wastes treatment centres. Such centres could be used for education and training, as well as for facilitation and promotion of the transfer of technologies for the environmentally sound management of hazardous wastes;

(f) Identify and strengthen relevant academic/research institutions or centres for excellence to enable them to carry out education and training activities in the environmentally sound management of hazardous wastes;

(g) Develop a programme for the establishment of national capacities and capabilities to educate and train staff at various levels in hazardous wastes management;

(h) Conduct environmental audits of existing industries to improve in-plant regimes for the management of hazardous wastes.

C. Promoting and strengthening international cooperation in the management of transboundary movements of hazardous wastes

Basis for action

20.32. In order to promote and strengthen international cooperation in the management, including control and monitoring, of transboundary movements of hazardous wastes, a precautionary approach should be applied. There is a need to harmonize the procedures and criteria used in various international and legal instruments. There is also a need to develop or harmonize existing criteria for identifying wastes dangerous to the environment and to build monitoring capacities.

Objectives

20.33. The objectives of this programme area are:

(a) To facilitate and strengthen international cooperation in the environmentally sound management of hazardous wastes, including control and monitoring of transboundary movements of such wastes, including wastes for recovery, by using internationally adopted criteria to identify and classify hazardous wastes and to harmonize relevant international legal instruments;

(b) To adopt a ban on or prohibit, as appropriate, the export of hazardous wastes to countries that do not have the capacity to deal with those wastes in an environmentally sound way or that have banned the import of such wastes;

(c) To promote the development of control procedures for the transboundary movement of hazardous wastes destined for recovery operations under the Basel Convention that encourage environmentally and economically sound recycling options.

Activities

(a) Management-related activities

Strengthening and harmonizing criteria and regulations

20.34. Governments, according to their capacities and available resources and with the cooperation of United Nations and other relevant organizations, as appropriate, should:

(a) Incorporate the notification procedure called for in the Basel Convention and relevant regional conventions, as well as in their annexes, into national legislation;

(b) Formulate, where appropriate, regional agreements such as the Bamako Convention regulating the transboundary movement of hazardous wastes;

(c) Help promote the compatibility and complementarity of such regional agreements with international conventions and protocols;

(d) Strengthen national and regional capacities and capabilities to monitor and control the transboundary movement of hazardous wastes;

(e) Promote the development of clear criteria and guidelines, within the framework of the Basel Convention and regional conventions, as appropriate, for environmentally and economically sound operation in resource recovery, recycling reclamation, direct use or alternative uses and for determination of acceptable recovery practices, including recovery levels where feasible and appropriate, with a view to preventing abuses and false presentation in the above operations;

(f) Consider setting up, at national and regional levels, as appropriate, systems for monitoring and surveillance of the transboundary movements of hazardous wastes;

(g) Develop guidelines for the assessment of environmentally sound treatment of hazardous wastes;

(h) Develop guidelines for the identification of hazardous wastes at the national level, taking into account existing internationally - and, where appropriate, regionally - agreed criteria and prepare a list of hazard profiles for the hazardous wastes listed in national legislation;

(i) Develop and use appropriate methods for testing, characterizing and classifying hazardous wastes and adopt or adapt safety standards and principles for managing hazardous wastes in an environmentally sound way.

Implementing existing agreements

20.35. Governments are urged to ratify the Basel Convention and the Bamako Convention, as applicable, and to pursue the expeditious elaboration of related protocols, such as protocols on liability and compensation, and of mechanisms and guidelines to facilitate the implementation of the Conventions.

Means of implementation

(a) Financing and cost evaluation

20.36. Because this programme area covers a relatively new field of operation and because of the lack so far of adequate studies on costing of activities under this programme, no cost estimate is available at present. However, the costs for some of the activities related to capacity-building that are presented under this programme could be considered to have been covered under the costing of programme area B above.

20.37. The interim secretariat for the Basel Convention should undertake studies in order to arrive at a reasonable cost estimate for activities to be undertaken initially until the year 2000.

(b) Capacity-building

20.38. Governments, according to their capacities and available resources and with the cooperation of United Nations and other relevant organizations, as appropriate, should:

(a) Elaborate or adopt policies for the environmentally sound management of hazardous wastes, taking into account existing international instruments;

(b) Make recommendations to the appropriate forums or establish or adapt norms, including the equitable implementation of the polluter pays principle, and regulatory measures to comply with obligations and principles of the Basel Convention, the Bamako Convention and other relevant existing or future agreements, including protocols, as appropriate, for setting appropriate rules and procedures in the field of liability and compensation for damage resulting from the transboundary movement and disposal of hazardous wastes;

(c) Implement policies for the implementation of a ban or prohibition, as appropriate, of exports of hazardous wastes to countries that do not have the capacity to deal with those wastes in an environmentally sound way or that have banned the import of such wastes;

(d) Study, in the context of the Basel Convention and relevant regional conventions, the feasibility of providing temporary financial assistance in the case of an emergency situation, in order to minimize damage from accidents arising from transboundary movements of hazardous wastes or during the disposal of those wastes.

D. Preventing illegal international traffic in hazardous wastes

Basis for action

20.39. The prevention of illegal traffic in hazardous wastes will benefit the environment and public health in all countries, particularly developing countries. It will also help to make the Basel Convention and regional international instruments, such as the Bamako Convention and the fourth Lomé Convention, more effective by promoting compliance with the controls established in those agreements. Article IX of the Basel Convention specifically addresses the issue of illegal shipments of hazardous wastes. Illegal traffic of hazardous wastes may cause serious threats to human health and the environment and impose a special and abnormal burden on the countries that receive such shipments.

20.40. Effective prevention requires action through effective monitoring and the enforcement and imposition of appropriate penalties.

Objectives

20.41. The objectives of this programme area are:

(a) To reinforce national capacities to detect and halt any illegal attempt to introduce hazardous wastes into the territory of any State in contravention of national legislation and relevant international legal instruments;

(b) To assist all countries, particularly developing countries, in obtaining all appropriate information concerning illegal traffic in hazardous wastes;

(c) To cooperate, within the framework of the Basel Convention, in assisting countries that suffer the consequences of illegal traffic.

Activities

(a) Management-related activities

20.42. Governments, according to their capacities and available resources and with the cooperation of the United Nations and other relevant organizations, as appropriate, should:

(a) Adopt, where necessary, and implement legislation to prevent the illegal import and export of hazardous wastes;

(b) Develop appropriate national enforcement programmes to monitor compliance with such legislation, detect and deter violations through appropriate penalties and give special attention to those who are known to have conducted illegal traffic in hazardous wastes and to hazardous wastes that are particularly susceptible to illegal traffic.

(b) Data and information

20.43. Governments should develop as appropriate, an information network and alert system to assist in detecting illegal traffic in hazardous wastes. Local communities and others could be involved in the operation of such a network and system.

20.44. Governments should cooperate in the exchange of information on illegal transboundary movements of hazardous wastes and should make such information available to appropriate United Nations bodies such as UNEP and the regional commissions.

(c) International and regional cooperation

20.45. The regional commissions, in cooperation with and relying upon expert support and advice from UNEP and other relevant bodies of the United Nations system, taking full account of the Basel Convention, shall continue to monitor

and assess the illegal traffic in hazardous wastes, including its environmental, economic and health implications, on a continuing basis, drawing upon the results and experience gained in the joint UNEP/ESCAP preliminary assessment of illegal traffic.

20.46. Countries and international organizations, as appropriate, should cooperate to strengthen the institutional and regulatory capacities, in particular of developing countries, in order to prevent the illegal import and export of hazardous wastes.

Chapter 21

ENVIRONMENTALLY SOUND MANAGEMENT OF SOLID WASTES AND SEWAGE-RELATED ISSUES

INTRODUCTION

21.1. This chapter has been incorporated in Agenda 21 in response to General Assembly resolution 44/228, section I, paragraph 3, in which the Assembly affirmed that the Conference should elaborate strategies and measures to halt and reverse the effects of environmental degradation in the context of increased national and international efforts to promote sustainable and environmentally sound development in all countries, and to section I, paragraph 12 (g), of the same resolution, in which the Assembly affirmed that environmentally sound management of wastes was among the environmental issues of major concern in maintaining the quality of the Earth's environment and especially in achieving environmentally sound and sustainable development in all countries.

21.2. Programme areas included in the present chapter of Agenda 21 are closely related to the following programme areas of other chapters of Agenda 21:

(a) Protection of the quality and supply of freshwater resources: application of integrated approaches to the development, management and use of water resources (chapter 18);

(b) Promoting sustainable human settlement development (chapter 7);

(c) Protecting and promoting human health conditions (chapter 6);

(d) Changing consumption patterns (chapter 4).

21.3. Solid wastes, as defined in this chapter, include all domestic refuse and non-hazardous wastes such as commercial and institutional wastes, street sweepings and construction debris. In some countries, the solid wastes management system also handles human wastes such as night-soil, ashes from incinerators, septic tank sludge and sludge from sewage treatment plants. If these wastes manifest hazardous characteristics they should be treated as hazardous wastes.

21.4. Environmentally sound waste management must go beyond the mere safe disposal or recovery of wastes that are generated and seek to address the root cause of the problem by attempting to change unsustainable patterns of production and consumption. This implies the application of the integrated life-cycle management concept, which presents a unique opportunity to reconcile development with environmental protection.

21.5. Accordingly, the framework for requisite action should be founded on a hierarchy of objectives and focused on the four major waste-related programme areas, as follows:

(a) Minimizing wastes;

(b) Maximizing environmentally sound waste reuse and recycling;

(c) Promoting environmentally sound waste disposal and treatment;

(d) Extending waste service coverage.

21.6. The four programme areas are interrelated and mutually supportive and must therefore be integrated in order to provide a comprehensive and environmentally responsive framework for managing municipal solid wastes. The mix and emphasis given to each of the four programme areas will vary according to the local socio-economic and physical conditions, rates of waste generation and waste composition. All sectors of society should participate in all the programme areas.

PROGRAMME AREAS

A. Minimizing wastes

Basis for action

21.7. Unsustainable patterns of production and consumption are increasing the quantities and variety of environmentally persistent wastes at unprecedented rates. The trend could significantly increase the quantities of wastes produced by the end of the century and increase quantities four to fivefold by the year 2025. A preventive waste management approach focused on changes in lifestyles and in production and consumption patterns offers the best chance for reversing current trends.

Objectives

21.8. The objectives in this area are:

(a) To stabilize or reduce the production of wastes destined for final disposal, over an agreed time-frame, by formulating goals based on waste weight, volume and composition and to induce separation to facilitate waste recycling and reuse;

(b) To strengthen procedures for assessing waste quantity and composition changes for the purpose of formulating operational waste minimization policies utilizing economic or other instruments to induce beneficial modifications of production and consumption patterns.

21.9. Governments, according to their capacities and available resources and with the cooperation of the United Nations and other relevant organizations, as appropriate, should:

(a) By the year 2000, ensure sufficient national, regional and international capacity to access, process and monitor waste trend information and implement waste minimization policies;

(b) By the year 2000, have in place in all industrialized countries programmes to stabilize or reduce, if practicable, production of wastes destined for final disposal, including per capita wastes (where this concept applies), at the level prevailing at that date; developing countries as well should work towards that goal without jeopardizing their development prospects;

(c) Apply by the year 2000, in all countries, in particular in industrialized countries, programmes to reduce the production of agrochemical wastes, containers and packaging materials, which do not meet hazardous characteristics.

Activities

(a) Management-related activities

21.10. Governments should initiate programmes to achieve sustained minimization of waste generation. Non-governmental organizations and consumer groups should be encouraged to participate in such programmes, which could be drawn up with the cooperation of international organizations, where necessary. These programmes should, wherever possible, build upon existing or planned activities and should:

(a) Develop and strengthen national capacities in research and design of environmentally sound technologies, as well as adopt measures to reduce wastes to a minimum;

(b) Provide for incentives to reduce unsustainable patterns of production and consumption;

(c) Develop, where necessary, national plans to minimize waste generation as part of overall national development plans;

(d) Emphasize waste minimization considerations in procurement within the United Nations system.

(b) Data and information

21.11. Monitoring is a key prerequisite for keeping track of changes in waste quantity and quality and their resultant impact on health and the environment. Governments, with the support of international agencies, should:

(a) Develop and apply methodologies for country-level waste monitoring;

(b) Undertake data gathering and analysis, establish national goals and monitor progress;

(c) Utilize data to assess environmental soundness of national waste policies as a basis for corrective action;

(d) Input information into global information systems.

(c) International and regional cooperation and coordination

21.12. The United Nations and intergovernmental organizations, with the collaboration of Governments, should help promote waste minimization by facilitating greater exchange of information, know-how and experience. The following is a non-exhaustive list of specific activities that could be undertaken:

(a) Identifying, developing and harmonizing methodologies for waste monitoring and transferring such methodologies to countries;

(b) Identifying and further developing the activities of existing information networks on clean technologies and waste minimization;

(c) Undertaking periodic assessment, collating and analysing country data and reporting systematically, in an appropriate United Nations forum, to the countries concerned;

(d) Reviewing the effectiveness of all waste minimization instruments and identifying potential new instruments that could be used and techniques by which they could be made operational at the country level. Guidelines and codes of practice should be developed;

(e) Undertaking research on the social and economic impacts of waste minimization at the consumer level.

Means of implementation

(a) Financing and cost evaluation

21.13. The Conference secretariat suggests that industrialized countries should consider investing in waste minimization the equivalent of about 1 per cent of the expenditures on solid wastes and sewage disposal. At current levels, this would amount to about $6.5 billion annually, including about $1.8 billion related to minimizing municipal solid wastes. Actual amounts would be determined by relevant municipal, provincial and national budget authorities based on local circumstances.

(b) Scientific and technological means

21.14. Waste minimization technologies and procedures will need to be identified and widely disseminated. This work should be coordinated by national Governments, with the cooperation and collaboration of non-governmental organizations, research institutions and appropriate organizations of the United Nations, and could include the following:

(a) Undertaking a continuous review of the effectiveness of all waste minimization instruments and identifying potential new instruments that could be used and techniques by which instruments could be made operational at the country level. Guidelines and codes of practice should be developed;

(b) Promoting waste prevention and minimization as the principal objective of national waste management programmes;

(c) Promoting public education and a range of regulatory and non-regulatory incentives to encourage industry to change product design and reduce industrial process wastes through cleaner production technologies and good housekeeping practices and to encourage industries and consumers to use types of packaging that can be safely reused;

(d) Executing, in accordance with national capacities, demonstration and pilot programmes to optimize waste minimization instruments;

(e) Establishing procedures for adequate transport, storage, conservation and management of agricultural products, foodstuffs and other perishable goods in order to reduce the loss of those products, which results in the production of solid waste;

(f) Facilitating the transfer of waste-reduction technologies to industry, particularly in developing countries, and establishing concrete national standards for effluents and solid waste, taking into account, inter alia, raw material use and energy consumption.

(c) Human resource development

21.15. Human resource development for waste minimization not only should be targeted at professionals in the waste management sector but also should seek to obtain the support of citizens and industry. Human resource development programmes must therefore aim to raise consciousness and educate and inform concerned groups and the public in general. Countries should incorporate within school curricula, where appropriate, the principles and practices of preventing and minimizing wastes and material on the environmental impacts of waste.

B. Maximizing environmentally sound waste reuse and recycling

Basis for action

21.16. The exhaustion of traditional disposal sites, stricter environmental controls governing waste disposal and increasing quantities of more persistent wastes, particularly in industrialized countries, have all contributed to a rapid increase in the cost of waste disposal services. Costs could double or triple by the end of the decade. Some current disposal practices pose a threat to the environment. As the economics of waste disposal services change, waste recycling and resource recovery are becoming increasingly cost-effective. Future waste management programmes should take maximum advantage of resource-efficient approaches to the control of wastes. These activities should be carried out in conjunction with public education programmes. It is important that markets for products from reclaimed materials be identified in the development of reuse and recycling programmes.

Objectives

21.17. The objectives in this area are:

(a) To strengthen and increase national waste reuse and recycling systems;

(b) To create a model internal waste reuse and recycling programme for waste streams, including paper, within the United Nations system;

(c) To make available information, techniques and appropriate policy instruments to encourage and make operational waste reuse and recycling schemes.

21.18. Governments, according to their capacities and available resources and with the cooperation of the United Nations and other relevant organizations, as appropriate, should:

(a) By the year 2000, promote sufficient financial and technological capacities at the regional, national and local levels, as appropriate, to implement waste reuse and recycling policies and actions;

(b) By the year 2000, in all industrialized countries, and by the year 2010, in all developing countries, have a national programme, including, to the extent possible, targets for efficient waste reuse and recycling.

Activities

(a) Management-related activities

21.19. Governments and institutions and non-governmental organizations, including consumer, women's and youth groups, in collaboration with appropriate organizations of the United Nations system, should launch

programmes to demonstrate and make operational enhanced waste reuse and recycling. These programmes should, wherever possible, build upon existing or planned activities and should:

(a) Develop and strengthen national capacity to reuse and recycle an increasing proportion of wastes;

(b) Review and reform national waste policies to provide incentives for waste reuse and recycling;

(c) Develop and implement national plans for waste management that take advantage of, and give priority to, waste reuse and recycling;

(d) Modify existing standards or purchase specifications to avoid discrimination against recycled materials, taking into account the saving in energy and raw materials;

(e) Develop public education and awareness programmes to promote the use of recycled products.

(b) Data and information

21.20. Information and research is required to identify promising socially acceptable and cost-effective forms of waste reuse and recycling relevant to each country. For example, supporting activities undertaken by national and local governments in collaboration with the United Nations and other international organizations could include:

(a) Undertaking an extensive review of options and techniques for reuse and recycling all forms of municipal solid wastes. Policies for reuse and recycling should be made an integral component of national and local waste management programmes;

(b) Assessing the extent and practice of waste reuse and recycling operations currently undertaken and identifying ways by which these could be increased and supported;

(c) Increasing funding for research pilot programmes to test various options for reuse and recycling, including the use of small-scale, cottage-based recycling industries; compost production; treated waste-water irrigation; and energy recovery from wastes;

(d) Producing guidelines and best practices for waste reuse and recycling;

(e) Intensifying efforts, at collecting, analysing and disseminating, to key target groups, relevant information on waste issues. Special research grants could be made available on a competitive basis for innovative research projects on recycling techniques;

(f) Identifying potential markets for recycled products.

(c) International and regional cooperation and coordination

21.21. States, through bilateral and multilateral cooperation, including through the United Nations and other relevant international organizations, as appropriate, should:

(a) Undertake a periodic review of the extent to which countries reuse and recycle their wastes;

(b) Review the effectiveness of techniques for and approaches to waste reuse and recycling and ways of enhancing their application in countries;

(c) Review and update international guidelines for the safe reuse of wastes;

(d) Establish appropriate programmes to support small communities' waste reuse and recycling industries in developing countries.

Means of implementation

(a) Financing and cost evaluation

21.22. The Conference secretariat has estimated that if the equivalent of 1 per cent of waste-related municipal expenditures was devoted to safe waste reuse schemes, worldwide expenditures for this purpose would amount to $8 billion. The secretariat estimates the total annual cost (1993-2000) of implementing the activities of this programme area in developing countries to be about $850 million on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific programmes proposed by international institutions and approved by their governing bodies.

(b) Scientific and technological means

21.23. The transfer of technology should support waste recycling and reuse by the following means:

(a) Including the transfer of recycling technologies, such as machinery for reusing plastics, rubber and paper, within bilateral and multilateral technical cooperation and aid programmes;

(b) Developing and improving existing technologies, especially indigenous technologies, and facilitating their transfer under ongoing regional and interregional technical assistance programmes;

(c) Facilitating the transfer of waste reuse and recycling technology.

21.24. Incentives for waste reuse and recycling are numerous. Countries could consider the following options to encourage industry, institutions, commercial establishments and individuals to recycle wastes instead of disposing of them:

(a) Offering incentives to local and municipal authorities that recycle the maximum proportion of their wastes;

(b) Providing technical assistance to informal waste reuse and recycling operations;

(c) Applying economic and regulatory instruments, including tax incentives, to support the principle that generators of wastes pay for their disposal;

(d) Providing legal and economic conditions conducive to investments in waste reuse and recycling;

(e) Implementing specific mechanisms such as deposit/refund systems as incentives for reuse and recycling;

(f) Promoting the separate collection of recyclable parts of household wastes;

(g) Providing incentives to improve the marketability of technically recyclable waste;

(h) Encouraging the use of recyclable materials, particularly in packaging, where feasible;

(i) Encouraging the development of markets for recycled goods by establishing programmes.

(c) Human resource development

21.25. Training will be required to reorient current waste management practices to include waste reuse and recycling. Governments, in collaboration with United Nations international and regional organizations, should undertake the following indicative list of actions:

(a) Including waste reuse and recycling in in-service training programmes as integral components of technical cooperation programmes on urban management and infrastructure development;

(b) Expanding training programmes on water supply and sanitation to incorporate techniques and policies for waste reuse and recycling;

(c) Including the advantages and civic obligations associated with waste reuse and recycling in school curricula and relevant general educational courses;

(d) Encouraging non-governmental organizations, community-based organizations and women's, youth and public interest group programmes, in collaboration with local municipal authorities, to mobilize community support for waste reuse and recycling through focused community-level campaigns.

(d) Capacity-building

21.26. Capacity-building to support increased waste reuse and recycling should focus on the following areas:

(a) Making operational national policies and incentives for waste management;

(b) Enabling local and municipal authorities to mobilize community support for waste reuse and recycling by involving and assisting informal sector waste reuse and recycling operations and undertaking waste management planning that incorporates resource recovery practices.

C. Promoting environmentally sound waste disposal and treatment

Basis for action

21.27. Even when wastes are minimized, some wastes will still remain. Even after treatment, all discharges of wastes have some residual impact on the receiving environment. Consequently, there is scope for improving waste treatment and disposal practices such as, for example, avoiding the discharge of sludges at sea. In developing countries, the problem is of a more fundamental nature: less than 10 per cent of urban wastes receive some form of treatment and only a small proportion of treatment is in compliance with any acceptable quality standard. Faecal matter treatment and disposal should be accorded due priority given the potential threat of faeces to human health.

Objectives

21.28. The objective in this area is to treat and safely dispose of a progressively increasing proportion of the generated wastes.

21.29. Governments, according to their capacities and available resources and with the cooperation of the United Nations and other relevant organizations, as appropriate, should:

(a) By the year 2000, establish waste treatment and disposal quality criteria, objectives and standards based on the nature and assimilative capacity of the receiving environment;

(b) By the year 2000, establish sufficient capacity to undertake waste-related pollution impact monitoring and conduct regular surveillance, including epidemiological surveillance, where appropriate;

(c) By the year 1995, in industrialized countries, and by the year 2005, in developing countries, ensure that at least 50 per cent of all sewage, waste waters and solid wastes are treated or disposed of in conformity with national or international environmental and health quality guidelines;

(d) By the year 2025, dispose of all sewage, waste waters and solid wastes in conformity with national or international environmental quality guidelines.

Activities

(a) Management-related activities

21.30. Governments, institutions and non-governmental organizations, together with industries, in collaboration with appropriate organizations of the United Nations system, should launch programmes to improve the control and management of waste-related pollution. These programmes should, wherever possible, build upon existing or planned activities and should:

(a) Develop and strengthen national capacity to treat and safely dispose of wastes;

(b) Review and reform national waste management policies to gain control over waste-related pollution;

(c) Encourage countries to seek waste disposal solutions within their sovereign territory and as close as possible to the sources of origin that are compatible with environmentally sound and efficient management. In a number of countries, transboundary movements take place to ensure that wastes are managed in an environmentally sound and efficient way. Such movements observe the relevant conventions, including those that apply to areas that are not under national jurisdiction;

(d) Develop human wastes management plans, giving due attention to the development and application of appropriate technologies and the availability of resources for implementation.

(b) Data and information

21.31. Standard setting and monitoring are two key elements essential for gaining control over waste-related pollution. The following specific activities are indicative of the kind of supportive actions that could be taken by international bodies such as the United Nations Centre for Human Settlements (Habitat), the United Nations Environment Programme and the World Health Organization:

(a) Assembling and analysing the scientific evidence and pollution impacts of wastes in the environment in order to formulate and disseminate recommended scientific criteria and guidelines for the environmentally sound management of solid wastes;

(b) Recommending national and, where relevant, local environmental quality standards based on scientific criteria and guidelines;

(c) Including within technical cooperation programmes and agreements the provision for monitoring equipment and for the requisite training in its use;

(d) Establishing an information clearing-house with extensive networks at the regional, national and local levels to collect and disseminate information on all aspects of waste management, including safe disposal.

(c) International and regional cooperation and coordination

21.32. States, through bilateral and multilateral cooperation, including through the United Nations and other relevant international organizations, as appropriate, should:

(a) Identify, develop and harmonize methodologies and environmental quality and health guidelines for safe waste discharge and disposal;

(b) Review and keep abreast of developments and disseminate information on the effectiveness of techniques and approaches to safe waste disposal and ways of supporting their application in countries.

Means of implementation

(a) Financing and cost evaluation

21.33. Safe waste disposal programmes are relevant to both developed and developing countries. In developed countries the focus is on improving facilities to meet higher environmental quality criteria, while in developing countries considerable investment is required to build new treatment facilities.

21.34. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme in developing countries to be about $15 billion, including about $3.4 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

21.35. Scientific guidelines and research on various aspects of waste-related pollution control will be crucial for achieving the objectives of this programme. Governments, municipalities and local authorities, with appropriate international cooperation, should:

(a) Prepare guidelines and technical reports on subjects such as the integration of land-use planning in human settlements with waste disposal, environmental quality criteria and standards, waste treatment and safe disposal options, industrial waste treatment and landfill operations;

(b) Undertake research on critical subjects such as low-cost, low-maintenance waste-water treatment systems; safe sludge disposal options; industrial waste treatment; and low-technology, ecologically safe waste disposal options;

(c) Transfer technologies, in conformity with the terms as well as the provisions of chapter 34 (Transfer of environmentally sound technology, cooperation and capacity-building), on industrial waste treatment processes through bilateral nad multilateral technical cooperation programmes and in cooperation with business and industry, including large and transnational corporations, as appropriate;

(d) Focus on the rehabilitation, operation and maintenance of existing facilities and technical assistance on improved maintenance practices and techniques followed by the planning and construction of waste treatment facilities;

(e) Establish programmes to maximize the source segregation and safe disposal of the hazardous components of municipal solid waste;

(f) Ensure the investment and provision of waste collection facilities with the concomitant provision of water services and with an equal and parallel investment and provision of waste treatment facilities.

(c) Human resource development

21.36. Training would be required to improve current waste management practices to include safe collection and waste disposal. The following is an indicative list of actions that should be taken by Governments, in collaboration with international organizations:

(a) Providing both formal and in-service training, focused on pollution control, waste treatment and disposal technologies, and operating and maintaining waste-related infrastructure. Intercountry staff exchange programmes should also be established;

(b) Undertaking the requisite training for waste-related pollution monitoring and control enforcement.

(d) Capacity-building

21.37. Institutional reforms and capacity-building will be indispensable if countries are to be able to quantify and mitigate waste-related pollution. Activities to achieve this objective should include:

(a) Creating and strengthening independent environmental control bodies at the national and local levels. International organizations and donors should support needed upgrading of manpower skills and provision of equipment;

(b) Empowering of pollution control agencies with the requisite legal mandate and financial capacities to carry out their duties effectively.

D. Extending waste service coverage

Basis for action

21.38. By the end of the century, over 2.0 billion people will be without access to basic sanitation, and an estimated half of the urban population in developing countries will be without adequate solid waste disposal services. As many as 5.2 million people, including 4 million children under five years of age, die each year from waste-related diseases. The health impacts are particularly severe for the urban poor. The health and environmental impacts of inadequate waste management, however, go beyond the unserved settlements themselves and result in water, land and air contamination and pollution over a wider area. Extending and improving waste collection and safe disposal services are crucial to gaining control over this form of pollution.

Objectives

21.39. The overall objective of this programme is to provide health-protecting, environmentally safe waste collection and disposal services to all people. Governments, according to their capacities and available resources and with the cooperation of the United Nations and other relevant organizations, as appropriate, should:

(a) By the year 2000, have the necessary technical, financial and human resource capacity to provide waste collection services commensurate with needs;

(b) By the year 2025, provide all urban populations with adequate waste services;

(c) By the year 2025, ensure that full urban waste service coverage is maintained and sanitation coverage achieved in all rural areas.

Activities

(a) Management-related activities

21.40. Governments, according to their capacities and available resources and with the cooperation of the United Nations and other relevant organizations, as appropriate, should:

(a) Establish financing mechanisms for waste management service development in deprived areas, including appropriate modes of revenue generation;

(b) Apply the "polluter pays" principle, where appropriate, by setting waste management charges at rates that reflect the costs of providing the service and ensure that those who generate the wastes pay the full cost of disposal in an environmentally safe way;

(c) Encourage institutionalization of communities' participation in planning and implementation procedures for solid waste management.

(b) Data and information

21.41. Governments, in collaboration with the United Nations and international organizations, should undertake the following:

(a) Developing and applying methodologies for waste monitoring;

(b) Data gathering and analysis to establish goals and monitor progress;

(c) Inputting information into a global information system building upon existing systems;

(d) Strengthening the activities of existing information networks in order to disseminate focused information on the application of innovative and low-cost alternatives for waste disposal to targeted audiences.

(c) International and regional cooperation and coordination

21.42. Many United Nations and bilateral programmes exist that seek to provide water supply and sanitation services to the unserved. The Water and Sanitation Collaborative Council, a global forum, currently acts to coordinate development and encourage cooperation. Even so, given the ever-increasing numbers of unserved urban poor populations and the need to address, in addition, the problem of solid waste disposal, additional mechanisms are essential to ensure accelerated coverage of urban waste disposal services. The international community in general and selected United Nations organizations in particular should:

(a) Launch a settlement infrastructure and environment programme following the United Nations Conference on Environment and Development to coordinate the activities of all organizations of the United Nations system involved in this area and include a clearing-house for information dissemination on all waste management issues;

(b) Undertake and systematically report on progress in providing waste services to those without such services;

(c) Review the effectiveness of techniques for and approaches to increasing coverage and identify innovative ways of accelerating the process.

Means of implementation

(a) Financing and cost evaluation

21.43. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $7.5 billion, including about $2.6 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

21.44. Governments and institutions, together with non-governmental organizations, should, in collaboration with appropriate organizations of the United Nations system, launch programmes in different parts of the developing world to extend waste services to the unserved populations. These programmes should, wherever possible, build upon and reorient existing or planned activities.

21.45. Policy changes at the national and local levels could enhance the rate of waste service coverage extension. These changes should include the following:

(a) Giving full recognition to and using the full range of low-cost options for waste management, including, where appropriate, their institutionalization and incorporation within codes of practice and regulation;

(b) Assigning high priority to the extension of waste management services, as necessary and appropriate, to all settlements irrespective of their legal status, giving due emphasis to meeting the waste disposal needs of the unserved, especially the unserved urban poor;

(c) Integrating the provision and maintenance of waste management services with other basic services such as water-supply and storm-water drainage.

21.46. Research activities could be enhanced. Countries, in cooperation with appropriate international organizations and non-governmental organizations, should, for instance:

(a) Find solutions and equipment for managing wastes in areas of concentrated populations and on small islands. In particular, there is a need for appropriate refuse storage and collection systems and cost-effective and hygienic human waste disposal options;

(b) Prepare and disseminate guidelines, case-studies, policy reviews and technical reports on appropriate solutions and modes of service delivery to unserved low-income areas;

(c) Launch campaigns to encourage active community participation involving women's and youth groups in the management of waste, particularly household waste;

(d) Promote intercountry transfer of relevant technologies, especially technologies for high-density settlements.

(c) Human resource development

21.47. International organizations and national and local Governments, in collaboration with non-governmental organizations, should provide focused training on low-cost waste collection and disposal options, particularly techniques for their planning and delivery. Intercountry staff exchange programmes among developing countries could form part of such training. Particular attention should be given to upgrading the status and skills of management-level personnel in waste management agencies.

21.48. Improvements in management techniques are likely to yield the greatest returns in terms of improving waste management service efficiency. The United Nations, international organizations and financial institutions should, in collaboration with national and local Governments, develop and render operational management information systems for municipal record keeping and accounting and for efficiency and effectiveness assessment.

(d) Capacity-building

21.49. Governments, institutions and non-governmental organizations, with the collaboration of appropriate organizations of the United Nations system, should develop capacities to implement programmes to provide waste collection and disposal services to the unserved populations. Some activities under the programmes should include the following:

(a) Establishing a special unit within current institutional arrangements to plan and deliver services to the unserved poor communities, with their involvement and participation;

(b) Making revisions to existing codes and regulations to permit the use of the full range of low-cost alternative technologies for waste disposal;

(c) Building institutional capacity and developing procedures for undertaking service planning and delivery.

Chapter 22

SAFE AND ENVIRONMENTALLY SOUND MANAGEMENT OF RADIOACTIVE WASTES

PROGRAMME AREA

Promoting the safe and environmentally sound management of radioactive wastes

Basis for action

22.1. Radioactive wastes are generated in the nuclear fuel cycle as well as in nuclear applications (the use of radionuclides in medicine, research and industry). The radiological and safety risk from radioactive wastes varies from very low in short-lived, low-level wastes up to very large for high-level wastes. Annually about 200,000 m^3 of low-level and intermediate-level waste and 10,000 m^3 of high-level waste (as well as spent nuclear fuel destined for final disposal) is generated world wide from nuclear power production. These volumes are increasing as more nuclear power units are taken into operation, nuclear facilities are decommissioned and the use of radionuclides increases. The high-level waste contains about 99 per cent of the radionuclides and thus represents the largest radiological risk. The waste volumes from nuclear applications are generally much smaller, typically some tens of cubic metres or less per year and country. However, the activity concentration, especially in sealed radiation sources, might be high, thus justifying very stringent radiological protection measures. The growth of waste volumes should continue to be kept under close review.

22.2. The safe and environmentally sound management of radioactive wastes, including their minimization, transportation and disposal, is important, given their characteristics. In most countries with a substantial nuclear power programme, technical and administrative measures have been taken to implement a waste management system. In many other countries still only in preparation for a national nuclear programme or having only nuclear applications, such systems are still needed.

Objective

22.3. The objective of this programme area is to ensure that radioactive wastes are safely managed, transported, stored and disposed of, with a view to protecting human health and the environment, within a wider framework of an interactive and integrated approach to radioactive waste management and safety.

Activities

(a) Management-related activities

22.4. States, in cooperation with relevant international organizations, where appropriate, should:

(a) Promote policies and practical measures to minimize and limit, where appropriate, the generation of radioactive wastes and provide for their safe processing, conditioning, transportation and disposal;

(b) Support efforts within IAEA to develop and promulgate radioactive waste safety standards or guidelines and codes of practice as an internationally accepted basis for the safe and environmentally sound management and disposal of radioactive wastes;

(c) Promote safe storage, transportation and disposal of radioactive wastes, as well as spent radiation sources and spent fuel from nuclear reactors destined for final disposal, in all countries, in particular in developing countries, by facilitating the transfer of relevant technologies to those countries and/or the return to the supplier of radiation sources after their use, in accordance with relevant international regulations or guidelines;

(d) Promote proper planning, including environmental impact assessment where appropriate, of safe and environmentally sound management of radioactive waste, including emergency procedures, storage, transportation and disposal, prior to and after activities that generate such waste.

(b) International and regional cooperation and coordination

22.5. States, in cooperation with relevant international organizations, where appropriate, should:

(a) Strengthen their efforts to implement the Code of Practice on the Transboundary Movements of Radioactive Waste and, under the auspices of IAEA, in cooperation with relevant international organizations dealing with different modes of transport, keep the question of such movements under active review, including the desirability of concluding a legally binding instrument;

(b) Encourage the London Dumping Convention to expedite work to complete studies on replacing the current voluntary moratorium on disposal of low-level radioactive wastes at sea by a ban, taking into account the precautionary approach, with a view to taking a well informed and timely decision on the issue;

(c) Not promote or allow the storage or disposal of high-level, intermediate-level and low-level radioactive wastes near the marine environment unless they determine that scientific evidence, consistent with the applicable internationally agreed principles and guidelines, shows that such storage or disposal poses no unacceptable risk to people and the marine

environment or does not interfere with other legitimate uses of the sea, making, in the process of consideration, appropriate use of the concept of the precautionary approach;

(d) Not export radioactive wastes to countries that, individually or through international agreements, prohibit the import of such wastes, such as the contracting parties to the Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement of Hazardous Wastes within Africa, the fourth Lomé Convention or other relevant conventions, where such prohibition is provided for;

(e) Respect, in accordance with international law, the decisions, as far as applicable to them, taken by parties to other relevant regional environmental conventions dealing with other aspects of safe and environmentally sound management of radioactive wastes.

Means of implementation

(a) Financing and cost evaluation

22.6. The costs at the national level of managing and disposing of radioactive wastes are considerable and will vary, depending on the technology used for disposal.

22.7. The Conference secretariat has estimated the average total annual cost (1993-2000) to international organizations to implement the activities of this programme to be about $8 million. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

22.8. States, in cooperation with international organizations, where appropriate, should:

(a) Promote research and development of methods for the safe and environmentally sound treatment, processing and disposal, including deep geological disposal, of high-level radioactive waste;

(b) Conduct research and assessment programmes concerned with evaluating the health and environmental impact of radioactive waste disposal.

(c) Capacity-building, including human resource development

22.9. States, in cooperation with relevant international organizations, should provide, as appropriate, assistance to developing countries to establish and/or strengthen radioactive waste management infrastructures, including legislation, organizations, trained manpower and facilities for the handling, processing, storage and disposal of wastes generated from nuclear applications.

SECTION III. STRENGTHENING THE ROLE OF MAJOR GROUPS

Chapter 23

PREAMBLE

23.1. Critical to the effective implementation of the objectives, policies and mechanisms agreed to by Governments in all programme areas of Agenda 21 will be the commitment and genuine involvement of all social groups.

23.2. One of the fundamental prerequisites for the achievement of sustainable development is broad public participation in decision-making. Furthermore, in the more specific context of environment and development, the need for new forms of participation has emerged. This includes the need of individuals, groups and organizations to participate in environmental impact assessment procedures and to know about and participate in decisions, particularly those which potentially affect the communities in which they live and work. Individuals, groups and organizations should have access to information relevant to environment and development held by national authorities, including information on products and activities that have or are likely to have a significant impact on the environment, and information on environmental protection measures.

23.3. Any policies, definitions or rules affecting access to and participation by non-governmental organizations in the work of United Nations institutions or agencies associated with the implementation of Agenda 21 must apply equally to all major groups.

23.4. The programme areas set out below address the means for moving towards real social partnership in support of common efforts for sustainable development.

Chapter 24

GLOBAL ACTION FOR WOMEN TOWARDS SUSTAINABLE AND EQUITABLE DEVELOPMENT

PROGRAMME AREA

Basis for action

24.1. The international community has endorsed several plans of action and conventions for the full, equal and beneficial integration of women in all development activities, in particular the Nairobi Forward-looking Strategies for the Advancement of Women, 1/ which emphasize women's participation in national and international ecosystem management and control of environment degradation. Several conventions, including the Convention on the Elimination of All Forms of Discrimination against Women (General Assembly resolution 34/180, annex) and conventions of ILO and UNESCO have also been adopted to end gender-based discrimination and ensure women access to land and other resources, education and safe and equal employment. Also relevant are the 1990 World Declaration on the Survival, Protection and Development of Children and the Plan of Action for implementing the Declaration (A/45/625, annex). Effective implementation of these programmes will depend on the active involvement of women in economic and political decision-making and will be critical to the successful implementation of Agenda 21.

Objectives

24.2. The following objectives are proposed for national Governments:

(a) To implement the Nairobi Forward-looking Strategies for the Advancement of Women, particularly with regard to women's participation in national ecosystem management and control of environment degradation;

(b) To increase the proportion of women decision makers, planners, technical advisers, managers and extension workers in environment and development fields;

(c) To consider developing and issuing by the year 2000 a strategy of changes necessary to eliminate constitutional, legal, administrative, cultural, behavioural, social and economic obstacles to women's full participation in sustainable development and in public life;

(d) To establish by the year 1995 mechanisms at the national, regional and international levels to assess the implementation and impact of development and environment policies and programmes on women and to ensure their contributions and benefits;

(e) To assess, review, revise and implement, where appropriate, curricula and other educational material, with a view to promoting the

dissemination to both men and women of gender-relevant knowledge and valuation of women's roles through formal and non-formal education, as well as through training institutions, in collaboration with non-governmental organizations;

(f) To formulate and implement clear governmental policies and national guidelines, strategies and plans for the achievement of equality in all aspects of society, including the promotion of women's literacy, education, training, nutrition and health and their participation in key decision-making positions and in management of the environment, particularly as it pertains to their access to resources, by facilitating better access to all forms of credit, particularly in the informal sector, taking measures towards ensuring women's access to property rights as well as agricultural inputs and implements;

(g) To implement, as a matter of urgency, in accordance with country-specific conditions, measures to ensure that women and men have the same right to decide freely and responsibly the number and spacing of their children and have access to information, education and means, as appropriate, to enable them to exercise this right in keeping with their freedom, dignity and personally held values;

(h) To consider adopting, strengthening and enforcing legislation prohibiting violence against women and to take all necessary administrative, social and educational measures to eliminate violence against women in all its forms.

Activities

24.3. Governments should take active steps to implement the following:

(a) Measures to review policies and establish plans to increase the proportion of women involved as decision makers, planners, managers, scientists and technical advisers in the design, development and implementation of policies and programmes for sustainable development;

(b) Measures to strengthen and empower women's bureaux, women's non-governmental organizations and women's groups in enhancing capacity-building for sustainable development;

(c) Measures to eliminate illiteracy among females and to expand the enrolment of women and girls in educational institutions, to promote the goal of universal access to primary and secondary education for girl children and for women, and to increase educational and training opportunities for women and girls in sciences and technology, particularly at the post-secondary level;

(d) Programmes to promote the reduction of the heavy workload of women and girl children at home and outside through the establishment of more and affordable nurseries and kindergartens by Governments, local authorities, employers and other relevant organizations and the sharing of household tasks by men and women on an equal basis, and to promote the provision of

environmentally sound technologies which have been designed, developed and improved in consultation with women, accessible and clean water, an efficient fuel supply and adequate sanitation facilities;

(e) Programmes to establish and strengthen preventive and curative health facilities, which include women-centred, women-managed, safe and effective reproductive health care and affordable, accessible, responsible planning of family size and services, as appropriate, in keeping with freedom, dignity and personally held values. Programmes should focus on providing comprehensive health care, including pre-natal care, education and information on health and responsible parenthood, and should provide the opportunity for all women to fully breastfeed at least during the first four months post-partum. Programmes should fully support women's productive and reproductive roles and well-being and should pay special attention to the need to provide equal and improved health care for all children and to reduce the risk of maternal and child mortality and sickness;

(f) Programmes to support and strengthen equal employment opportunities and equitable remuneration for women in the formal and informal sectors with adequate economic, political and social support systems and services, including child care, particularly day-care facilities and parental leave, and equal access to credit, land and other natural resources;

(g) Programmes to establish rural banking systems with a view to facilitating and increasing rural women's access to credit and to agricultural inputs and implements;

(h) Programmes to develop consumer awareness and the active participation of women, emphasizing their crucial role in achieving changes necessary to reduce or eliminate unsustainable patterns of consumption and production, particularly in industrialized countries, in order to encourage investment in environmentally sound productive activities and induce environmentally and socially friendly industrial development;

(i) Programmes to eliminate persistent negative images, stereotypes, attitudes and prejudices against women through changes in socialization patterns, the media, advertising, and formal and non-formal education;

(j) Measures to review progress made in these areas, including the preparation of a review and appraisal report which includes recommendations to be submitted to the 1995 world conference on women.

24.4. Governments are urged to ratify all relevant conventions pertaining to women if they have not already done so. Those that have ratified conventions should enforce and establish legal, constitutional and administrative procedures to transform agreed rights into domestic legislation and should adopt measures to implement them in order to strengthen the legal capacity of women for full and equal participation in issues and decisions on sustainable development.

24.5. States parties to the Convention on the Elimination of All Forms of Discrimination against Women should review and suggest amendments to it by the year 2000, with a view to strengthening those elements of the Convention related to environment and development, giving special attention to the issue of access and entitlements to natural resources, technology, creative banking facilities and low-cost housing, and the control of pollution and toxicity in the home and workplace. States parties should also clarify the extent of the Convention's scope with respect to the issues of environment and development and request the Committee on the Elimination of Discrimination against Women to develop guidelines regarding the nature of reporting such issues, required under particular articles of the Convention.

(a) Areas requiring urgent action

24.6. Countries should take urgent measures to avert the ongoing rapid environmental and economic degradation in developing countries that generally affects the lives of women and children in rural areas suffering drought, desertification and deforestation, armed hostilities, natural disasters, toxic waste and the aftermath of the use of unsuitable agro-chemical products.

24.7. In order to reach these goals, women should be fully involved in decision-making and in the implementation of sustainable development activities.

(b) Research, data collection and dissemination of information

24.8. Countries should develop gender-sensitive databases, information systems and participatory action-oriented research and policy analyses with the collaboration of academic institutions and local women researchers on the following:

(a) Knowledge and experience on the part of women of the management and conservation of natural resources for incorporation in the databases and information systems for sustainable development;

(b) The impact of structural adjustment programmes on women. In research done on structural adjustment programmes, special attention should be given to the differential impact of those programmes on women, especially in terms of cut-backs in social services, education and health and in the removal of subsidies on food and fuel;

(c) The impact on women of environmental degradation, particularly drought, desertification, toxic chemicals and armed hostilities;

(d) Analysis of the structural linkages between gender relations, environment and development;

(e) The integration of the value of unpaid work, including work that is currently designated "domestic", in resource accounting mechanisms in order better to represent the true value of the contribution of women to the

economy, using revised guidelines for the United Nations System of National Accounts, to be issued in 1993;

(f) Measures to develop and include environmental, social and gender impact analyses as an essential step in the development and monitoring of programmes and policies;

(g) Programmes to create rural and urban training, research and resource centres in developing and developed countries that will serve to disseminate environmentally sound technologies to women.

(c) International and regional cooperation and coordination

24.9. The Secretary-General of the United Nations should review the adequacy of all United Nations institutions, including those with a special focus on the role of women, in meeting development and environment objectives, and make recommendations for strengthening their capacities. Institutions that require special attention in this area include the Division for the Advancement of Women (Centre for Social Development and Humanitarian Affairs, United Nations Office at Vienna), the United Nations Development Fund for Women (UNIFEM), the International Research and Training Institute for the Advancement of Women (INSTRAW) and the women's programmes of regional commissions. The review should consider how the environment and development programmes of each body of the United Nations system could be strengthened to implement Agenda 21 and how to incorporate the role of women in programmes and decisions related to sustainable development.

24.10. Each body of the United Nations system should review the number of women in senior policy-level and decision-making posts and, where appropriate, adopt programmes to increase that number, in accordance with Economic and Social Council resolution 1991/17 on the improvement of the status of women in the Secretariat.

24.11. UNIFEM should establish regular consultations with donors in collaboration with UNICEF, with a view to promoting operational programmes and projects on sustainable development that will strengthen the participation of women, especially low-income women, in sustainable development and in decision-making. UNDP should establish a women's focal point on development and environment in each of its resident representative offices to provide information and promote exchange of experience and information in these fields. Bodies of the United Nations system, governments and non-governmental organizations involved in the follow-up to the Conference and the implementation of Agenda 21 should ensure that gender considerations are fully integrated into all the policies, programmes and activities.

Means of implementation

Financing and cost evaluation

24.12. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this chapter to be about $40 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

Notes

1/ Report of the World Conference to Review and Appraise the Achievements of the United Nations Decade for Women: Equality, Development and Peace, Nairobi, 15-26 July 1985 (United Nations publication, Sales No. E.85.IV.10), chap. I, sect. A.

Chapter 25

CHILDREN AND YOUTH IN SUSTAINABLE DEVELOPMENT

INTRODUCTION

25.1. Youth comprise nearly 30 per cent of the world's population. The involvement of today's youth in environment and development decision-making and in the implementation of programmes is critical to the long-term success of Agenda 21.

PROGRAMME AREAS

A. Advancing the role of youth and actively involving them in the protection of the environment and the promotion of economic and social development

Basis for action

25.2. It is imperative that youth from all parts of the world participate actively in all relevant levels of decision-making processes because it affects their lives today and has implications for their futures. In addition to their intellectual contribution and their ability to mobilize support, they bring unique perspectives that need to be taken into account.

25.3. Numerous actions and recommendations within the international community have been proposed to ensure that youth are provided a secure and healthy future, including an environment of quality, improved standards of living and access to education and employment. These issues need to be addressed in development planning.

Objectives

25.4. Each country should, in consultation with its youth communities, establish a process to promote dialogue between the youth community and Government at all levels and to establish mechanisms that permit youth access to information and provide them with the opportunity to present their perspectives on government decisions, including the implementation of Agenda 21.

25.5. Each country, by the year 2000, should ensure that more than 50 per cent of its youth, gender balanced, are enrolled in or have access to appropriate secondary education or equivalent educational or vocational training programmes by increasing participation and access rates on an annual basis.

25.6. Each country should undertake initiatives aimed at reducing current levels of youth unemployment, particularly where they are disproportionately high in comparison to the overall unemployment rate.

25.7. Each country and the United Nations should support the promotion and creation of mechanisms to involve youth representation in all United Nations processes in order to influence those processes.

25.8. Each country should combat human rights abuses against young people, particularly young women and girls, and should consider providing all youth with legal protection, skills, opportunities and the support necessary for them to fulfil their personal, economic and social aspirations and potentials.

Activities

25.9. Governments, according to their strategies, should take measures to:

(a) Establish procedures allowing for consultation and possible participation of youth of both genders, by 1993, in decision-making processes with regard to the environment, involving youth at the local, national and regional levels;

(b) Promote dialogue with youth organizations regarding the drafting and evaluation of environment plans and programmes or questions on development;

(c) Consider for incorporation into relevant policies the recommendations of international, regional and local youth conferences and other forums that offer youth perspectives on social and economic development and resource management;

(d) Ensure access for all youth to all types of education, wherever appropriate, providing alternative learning structures, ensure that education reflects the economic and social needs of youth and incorporates the concepts of environmental awareness and sustainable development throughout the curricula; and expand vocational training, implementing innovative methods aimed at increasing practical skills, such as environmental scouting;

(e) In cooperation with relevant ministries and organizations, including representatives of youth, develop and implement strategies for creating alternative employment opportunities and provide required training to young men and women;

(f) Establish task forces that include youth and youth non-governmental organizations to develop educational and awareness programmes specifically targeted to the youth population on critical issues pertaining to youth. These task forces should use formal and non-formal educational methods to reach a maximum audience. National and local media, non-governmental organizations, businesses and other organizations should assist in these task forces;

(g) Give support to programmes, projects, networks, national organizations and youth non-governmental organizations to examine the integration of programmes in relation to their project requirements,

encouraging the involvement of youth in project identification, design, implementation and follow-up;

(h) Include youth representatives in their delegations to international meetings, in accordance with the relevant General Assembly resolutions adopted in 1968, 1977, 1985 and 1989.

25.10. The United Nations and international organizations with youth programmes should take measures to:

(a) Review their youth programmes and consider how coordination between them can be enhanced;

(b) Improve the dissemination of relevant information to Governments, youth organizations and other non-governmental organizations on current youth positions and activities, and monitor and evaluate the application of Agenda 21;

(c) Promote the United Nations Trust Fund for the International Youth Year and collaborate with youth representatives in the administration of it, focusing particularly on the needs of youth from developing countries.

Means of implementation

Financing and cost evaluation

25.11. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $1.5 million on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

B. Children in sustainable development

Basis for action

25.12. Children not only will inherit the responsibility of looking after the Earth, but in many developing countries they comprise nearly half the population. Furthermore, children in both developing and industrialized countries are highly vulnerable to the effects of environmental degradation. They are also highly aware supporters of environmental thinking. The specific interests of children need to be taken fully into account in the participatory process on environment and development in order to safeguard the future sustainability of any actions taken to improve the environment.

Objectives

25.13. National Governments, according to their policies, should take measures to:

(a) Ensure the survival, protection and development of children, in accordance with the goals endorsed by the 1990 World Summit for Children (A/45/625, annex);

(b) Ensure that the interests of children are taken fully into account in the participatory process for sustainable development and environmental improvement.

Activities

25.14. Governments should take active steps to:

(a) Implement programmes for children designed to reach the child-related goals of the 1990s in the areas of environment and development, especially health, nutrition, education, literacy and poverty alleviation;

(b) Ratify the Convention on the Rights of the Child (General Assembly resolution 44/25 of 20 November 1989, annex), at the earliest moment and implement it by addressing the basic needs of youth and children;

(c) Promote primary environmental care activities that address the basic needs of communities, improve the environment for children at the household and community level and encourage the participation and empowerment of local populations, including women, youth, children and indigenous people, towards the objective of integrated community management of resources, especially in developing countries;

(d) Expand educational opportunities for children and youth, including education for environmental and developmental responsibility, with overriding attention to the education of the girl child;

(e) Mobilize communities through schools and local health centres so that children and their parents become effective focal points for sensitization of communities to environmental issues;

(f) Establish procedures to incorporate children's concerns into all relevant policies and strategies for environment and development at the local, regional and national levels, including those concerning allocation of and entitlement to natural resources, housing and recreation needs, and control of pollution and toxicity in both rural and urban areas.

25.15. International and regional organizations should cooperate and coordinate in the proposed areas. UNICEF should maintain cooperation and collaboration with other organizations of the United Nations, Governments and non-governmental organizations to develop programmes for children and programmes to mobilize children in the activities outlined above.

Means of implementation

(a) Financing and cost evaluation

25.16. Financing requirements for most of the activities are included in estimates for other programmes.

(b) Human resource development and capacity-building

25.17. The activities should facilitate capacity-building and training activities already contained in other chapters of Agenda 21.

Chapter 26

RECOGNIZING AND STRENGTHENING THE ROLE OF INDIGENOUS PEOPLE AND THEIR COMMUNITIES

PROGRAMME AREA

Basis for action

26.1. Indigenous people and their communities have an historical relationship with their lands and are generally descendants of the original inhabitants of such lands. In the context of this chapter the term "lands" is understood to include the environment of the areas which the people concerned traditionally occupy. Indigenous people and their communities represent a significant percentage of the global population. They have developed over many generations a holistic traditional scientific knowledge of their lands, natural resources and environment. Indigenous people and their communities shall enjoy the full measure of human rights and fundamental freedoms without hindrance or discrimination. Their ability to participate fully in sustainable development practices on their lands has tended to be limited as a result of factors of an economic, social and historical nature. In view of the interrelationship between the natural environment and its sustainable development and the cultural, social, economic and physical well-being of indigenous people, national and international efforts to implement environmentally sound and sustainable development should recognize, accommodate, promote and strengthen the role of indigenous people and their communities.

26.2. Some of the goals inherent in the objectives and activities of this programme area are already contained in such international legal instruments as the ILO Indigenous and Tribal Peoples Convention (No. 169) and are being incorporated into the draft universal declaration on indigenous rights, being prepared by the United Nations working group on indigenous populations. The International Year for the World's Indigenous People (1993), proclaimed by the General Assembly in its resolution 45/164 of 18 December 1990, presents a timely opportunity to mobilize further international technical and financial cooperation.

Objectives

26.3. In full partnership with indigenous people and their communities, Governments and, where appropriate, intergovernmental organizations should aim at fulfilling the following objectives:

(a) Establishment of a process to empower indigenous people and their communities through measures that include:

(i) Adoption or strengthening of appropriate policies and/or legal instruments at the national level;

(ii) Recognition that the lands of indigenous people and their communities should be protected from activities that are environmentally unsound or that the indigenous people concerned consider to be socially and culturally inappropriate;

(iii) Recognition of their values, traditional knowledge and resource management practices with a view to promoting environmentally sound and sustainable development;

(iv) Recognition that traditional and direct dependence on renewable resources and ecosystems, including sustainable harvesting, continues to be essential to the cultural, economic and physical well-being of indigenous people and their communities;

(v) Development and strengthening of national dispute-resolution arrangements in relation to settlement of land and resource-management concerns;

(vi) Support for alternative environmentally sound means of production to ensure a range of choices on how to improve their quality of life so that they effectively participate in sustainable development;

(vii) Enhancement of capacity-building for indigenous communities, based on the adaptation and exchange of traditional experience, knowledge and resource-management practices, to ensure their sustainable development;

(b) Establishment, where appropriate, of arrangements to strengthen the active participation of indigenous people and their communities in the national formulation of policies, laws and programmes relating to resource management and other development processes that may affect them, and their initiation of proposals for such policies and programmes;

(c) Involvement of indigenous people and their communities at the national and local levels in resource management and conservation strategies and other relevant programmes established to support and review sustainable development strategies, such as those suggested in other programme areas of Agenda 21.

Activities

26.4. Some indigenous people and their communities may require, in accordance with national legislation, greater control over their lands, self-management of their resources, participation in development decisions affecting them, including, where appropriate, participation in the establishment or management of protected areas. The following are some of the specific measures which Governments could take:

(a) Consider the ratification and application of existing international conventions relevant to indigenous people and their communities (where not yet

done) and provide support for the adoption by the General Assembly of a declaration on indigenous rights;

(b) Adopt or strengthen appropriate policies and/or legal instruments that will protect indigenous intellectual and cultural property and the right to preserve customary and administrative systems and practices.

26.5. United Nations organizations and other international development and finance organizations and Governments should, drawing on the active participation of indigenous people and their communities, as appropriate, take the following measures, inter alia, to incorporate their values, views and knowledge, including the unique contribution of indigenous women, in resource management and other policies and programmes that may affect them:

(a) Appoint a special focal point within each international organization, and organize annual interorganizational coordination meetings in consultation with Governments and indigenous organizations, as appropriate, and develop a procedure within and between operational agencies for assisting Governments in ensuring the coherent and coordinated incorporation of the views of indigenous people in the design and implementation of policies and programmes. Under this procedure, indigenous people and their communities should be informed and consulted and allowed to participate in national decision-making, in particular regarding regional and international cooperative efforts. In addition, these policies and programmes should take fully into account strategies based on local indigenous initiatives;

(b) Provide technical and financial assistance for capacity-building programmes to support the sustainable self-development of indigenous people and their communities;

(c) Strengthen research and education programmes aimed at:

(i) Achieving a better understanding of indigenous people's knowledge and management experience related to the environment, and applying this to contemporary development challenges;

(ii) Increasing the efficiency of indigenous people's resource management systems, for example, by promoting the adaptation and dissemination of suitable technological innovations;

(d) Contribute to the endeavours of indigenous people and their communities in resource management and conservation strategies (such as those that may be developed under appropriate projects funded through the Global Environment Facility and the Tropical Forestry Action Plan) and other programme areas of Agenda 21, including programmes to collect, analyse and use data and other information in support of sustainable development projects.

26.6. Governments, in full partnership with indigenous people and their communities should, where appropriate:

(a) Develop or strengthen national arrangements to consult with indigenous people and their communities with a view to reflecting their needs and incorporating their values and traditional and other knowledge and practices in national policies and programmes in the field of natural resource management and conservation and other development programmes affecting them;

(b) Cooperate at the regional level, where appropriate, to address common indigenous issues with a view to recognizing and strengthening their participation in sustainable development.

Means of implementation

(a) Financing and cost evaluation

26.7. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $3 million on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Legal and administrative frameworks

26.8. Governments should incorporate, in collaboration with the indigenous people affected, the rights and responsibilities of indigenous people and their communities in the legislation of each country, suitable to the country's specific situation. Developing countries may require technical assistance to implement these activities.

(c) Human resource development

26.9. International development agencies and Governments should commit financial and other resources to education and training for indigenous people and their communities to develop their capacities to achieve their sustainable self-development, and to contribute to and participate in sustainable and equitable development at the national level. Particular attention should be given to strengthening the role of indigenous women.

Chapter 27

STRENGTHENING THE ROLE OF NON-GOVERNMENTAL ORGANIZATIONS: PARTNERS FOR SUSTAINABLE DEVELOPMENT

PROGRAMME AREA

Basis for action

27.1. Non-governmental organizations play a vital role in the shaping and implementation of participatory democracy. Their credibility lies in the responsible and constructive role they play in society. Formal and informal organizations, as well as grass-roots movements, should be recognized as partners in the implementation of Agenda 21. The nature of the independent role played by non-governmental organizations within a society calls for real participation; therefore, independence is a major attribute of non-governmental organizations and is the precondition of real participation.

27.2. One of the major challenges facing the world community as it seeks to replace unsustainable development patterns with environmentally sound and sustainable development is the need to activate a sense of common purpose on behalf of all sectors of society. The chances of forging such a sense of purpose will depend on the willingness of all sectors to participate in genuine social partnership and dialogue, while recognizing the independent roles, responsibilities and special capacities of each.

27.3. Non-governmental organizations, including those non-profit organizations representing groups addressed in the present section of Agenda 21, possess well-established and diverse experience, expertise and capacity in fields which will be of particular importance to the implementation and review of environmentally sound and socially responsible sustainable development, as envisaged throughout Agenda 21. The community of non-governmental organizations, therefore, offers a global network that should be tapped, enabled and strengthened in support of efforts to achieve these common goals.

27.4. To ensure that the full potential contribution of non-governmental organizations is realized, the fullest possible communication and cooperation between international organizations, national and local governments and non-governmental organizations should be promoted in institutions mandated, and programmes designed to carry out Agenda 21. Non-governmental organizations will also need to foster cooperation and communication among themselves to reinforce their effectiveness as actors in the implementation of sustainable development.

Objectives

27.5. Society, Governments and international bodies should develop mechanisms to allow non-governmental organizations to play their partnership role responsibly and effectively in the process of environmentally sound and sustainable development.

27.6. With a view to strengthening the role of non-governmental organizations as social partners, the United Nations system and Governments should initiate a process, in consultation with non-governmental organizations, to review formal procedures and mechanisms for the involvement of these organizations at all levels from policy-making and decision-making to implementation.

27.7. By 1995, a mutually productive dialogue should be established at the national level between all Governments and non-governmental organizations and their self-organized networks to recognize and strengthen their respective roles in implementing environmentally sound and sustainable development.

27.8. Governments and international bodies should promote and allow the participation of non-governmental organizations in the conception, establishment and evaluation of official mechanisms and formal procedures designed to review the implementation of Agenda 21 at all levels.

Activities

27.9. The United Nations system, including international finance and development agencies, and all intergovernmental organizations and forums should, in consultation with non-governmental organizations, take measures to:

(a) Review and report on ways of enhancing existing procedures and mechanisms by which non-governmental organizations contribute to policy design, decision-making, implementation and evaluation at the individual agency level, in inter-agency discussions and in United Nations conferences;

(b) On the basis of subparagraph (a) above, enhance existing or, where they do not exist, establish, mechanisms and procedures within each agency to draw on the expertise and views of non-governmental organizations in policy and programme design, implementation and evaluation;

(c) Review levels of financial and administrative support for non-governmental organizations and the extent and effectiveness of their involvement in project and programme implementation, with a view to augmenting their role as social partners;

(d) Design open and effective means of achieving the participation of non-governmental organizations in the processes established to review and evaluate the implementation of Agenda 21 at all levels;

(e) Promote and allow non-governmental organizations and their self-organized networks to contribute to the review and evaluation of policies and programmes designed to implement Agenda 21, including support for developing country non-governmental organizations and their self-organized networks;

(f) Take into account the findings of non-governmental review systems and evaluation processes in relevant reports of the Secretary-General to the General Assembly, and of all pertinent United Nations organizations and other intergovernmental organizations and forums concerning implementation of Agenda 21, in accordance with the review process for Agenda 21;

(g) Provide access for non-governmental organizations to accurate and timely data and information to promote the effectiveness of their programmes and activities and their roles in support of sustainable development.

27.10. Governments should take measures to:

(a) Establish or enhance an existing dialogue with non-governmental organizations and their self-organized networks representing various sectors, which could serve to: (i) consider the rights and responsibilities of these organizations; (ii) efficiently channel integrated non-governmental inputs to the governmental policy development process; and (iii) facilitate non-governmental coordination in implementing national policies at the programme level;

(b) Encourage and enable partnership and dialogue between local non-governmental organizations and local authorities in activities aimed at sustainable development;

(c) Involve non-governmental organizations in national mechanisms or procedures established to carry out Agenda 21, making the best use of their particular capacities, especially in the fields of education, poverty alleviation and environmental protection and rehabilitation;

(d) Take into account the findings of non-governmental monitoring and review mechanisms in the design and evaluation of policies concerning the implementation of Agenda 21 at all levels;

(e) Review government education systems to identify ways to include and expand the involvement of non-governmental organizations in the field of formal and informal education and of public awareness;

(f) Make available and accessible to non-governmental organizations the data and information necessary for their effective contribution to research and to the design, implementation and evaluation of programmes.

Means of implementation

(a) Financing and cost evaluation

27.11. Depending on the outcome of review processes and the evolution of views as to how best to build partnership and dialogue between official organizations and groups of non-governmental organizations, relatively limited but unpredictable, costs will be involved at the international and national levels in enhancing consultative procedures and mechanisms. Non-governmental organizations will also require additional funding in support of their establishment of, improvement of or contributions to Agenda 21 monitoring systems. These costs will be significant but cannot be reliably estimated on the basis of existing information.

(b) Capacity-building

27.12. The organizations of the United Nations system and other intergovernmental organizations and forums, bilateral programmes and the private sector, as appropriate, will need to provide increased financial and administrative support for non-governmental organizations and their self-organized networks, in particular those based in developing countries, that contribute to the monitoring and evaluation of Agenda 21 programmes, and provide training for non-governmental organizations (and assist them to develop their own training programmes) at the international and regional levels to enhance their partnership role in programme design and implementation.

27.13. Governments will need to promulgate or strengthen, subject to country-specific conditions, any legislative measures necessary to enable the establishment by non-governmental organizations of consultative groups, and to ensure the right of non-governmental organizations to protect the public interest through legal action.

Chapter 28

LOCAL AUTHORITIES' INITIATIVES IN SUPPORT OF AGENDA 21

PROGRAMME AREA

Basis for action

28.1. Because so many of the problems and solutions being addressed by Agenda 21 have their roots in local activities, the participation and cooperation of local authorities will be a determining factor in fulfilling its objectives. Local authorities construct, operate and maintain economic, social and environmental infrastructure, oversee planning processes, establish local environmental policies and regulations, and assist in implementing national and subnational environmental policies. As the level of governance closest to the people, they play a vital role in educating, mobilizing and responding to the public to promote sustainable development.

Objectives

28.2. The following objectives are proposed for this programme area:

(a) By 1996, most local authorities in each country should have undertaken a consultative process with their populations and achieved a consensus on "a local Agenda 21" for the community;

(b) By 1993, the international community should have initiated a consultative process aimed at increasing cooperation between local authorities;

(c) By 1994, representatives of associations of cities and other local authorities should have increased levels of cooperation and coordination with the goal of enhancing the exchange of information and experience among local authorities;

(d) All local authorities in each country should be encouraged to implement and monitor programmes which aim at ensuring that women and youth are represented in decision-making, planning and implementation processes.

Activities

28.3. Each local authority should enter into a dialogue with its citizens, local organizations and private enterprises and adopt "a local Agenda 21". Through consultation and consensus-building, local authorities would learn from citizens and from local, civic, community, business and industrial organizations and acquire the information needed for formulating the best strategies. The process of consultation would increase household awareness of sustainable development issues. Local authority programmes, policies, laws and regulations to achieve Agenda 21 objectives would be assessed and modified, based on local programmes adopted. Strategies could also be used in supporting proposals for local, national, regional and international funding.

28.4. Partnerships should be fostered among relevant organs and organizations such as UNDP, the United Nations Centre for Human Settlements (Habitat) and UNEP, the World Bank, regional banks, the International Union of Local Authorities, the World Association of the Major Metropolises, Summit of Great Cities of the World, the United Towns Organization and other relevant partners, with a view to mobilizing increased international support for local authority programmes. An important goal would be to support, extend and improve existing institutions working in the field of local authority capacity-building and local environment management. For this purpose:

(a) Habitat and other relevant organs and organizations of the United Nations system are called upon to strengthen services in collecting information on strategies of local authorities, in particular for those that need international support;

(b) Periodic consultations involving both international partners and developing countries could review strategies and consider how such international support could best be mobilized. Such a sectoral consultation would complement concurrent country-focused consultations, such as those taking place in consultative groups and round tables.

28.5. Representatives of associations of local authorities are encouraged to establish processes to increase the exchange of information, experience and mutual technical assistance among local authorities.

Means of implementation

(a) Financing and cost evaluation

28.6. It is recommended that all parties reassess funding needs in this area. The Conference secretariat has estimated the average total annual cost (1993-2000) for strengthening international secretariat services for implementing the activities in this chapter to be about $1 million on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments.

(b) Human resource development and capacity-building

28.7. This programme should facilitate the capacity-building and training activities already contained in other chapters of Agenda 21.

Chapter 29

STRENGTHENING THE ROLE OF WORKERS AND THEIR TRADE UNIONS

PROGRAMME AREA

Basis for action

29.1. Efforts to implement sustainable development will involve adjustments and opportunities at the national and enterprise levels, with workers foremost among those concerned. As their representatives, trade unions are vital actors in facilitating the achievement of sustainable development in view of their experience in addressing industrial change, the extremely high priority they give to protection of the working environment and the related natural environment, and their promotion of socially responsible and economic development. The existing network of collaboration among trade unions and their extensive membership provide important channels through which the concepts and practices of sustainable development can be supported. The established principles of tripartism provide a basis for strengthened collaboration between workers and their representatives, Governments and employers in the implementation of sustainable development.

Objectives

29.2. The overall objective is poverty alleviation and full and sustainable employment, which contribute to safe, clean and healthy environments - the working environment, the community and the physical environment. Workers should be full participants in the implementation and evaluation of activities related to Agenda 21.

29.3. To that end the following objectives are proposed for accomplishment by the year 2000:

(a) To promote ratification of relevant conventions of ILO and the enactment of legislation in support of those conventions;

(b) To establish bipartite and tripartite mechanisms on safety, health and sustainable development;

(c) To increase the number of environmental collective agreements aimed at achieving sustainable development;

(d) To reduce occupational accidents, injuries and diseases according to recognized statistical reporting procedures;

(e) To increase the provision of workers' education, training and retraining, particularly in the area of occupational health and safety and environment.

Activities

(a) Promoting freedom of association

29.4. For workers and their trade unions to play a full and informed role in support of sustainable development, Governments and employers should promote the rights of individual workers to freedom of association and the protection of the right to organize as laid down in ILO conventions. Governments should consider ratifying and implementing those conventions, if they have not already done so.

(b) Strengthening participation and consultation

29.5. Governments, business and industry should promote the active participation of workers and their trade unions in decisions on the design, implementation and evaluation of national and international policies and programmes on environment and development, including employment policies, industrial strategies, labour adjustment programmes and technology transfers.

29.6. Trade unions, employers and Governments should cooperate to ensure that the concept of sustainable development is equitably implemented.

29.7. Joint (employer/worker) or tripartite (employer/worker/Government) collaborative mechanisms at the workplace, community and national levels should be established to deal with safety, health and environment, including special reference to the rights and status of women in the workplace.

29.8. Governments and employers should ensure that workers and their representatives are provided with all relevant information to enable effective participation in these decision-making processes.

29.9. Trade unions should continue to define, develop and promote policies on all aspects of sustainable development.

29.10. Trade unions and employers should establish the framework for a joint environmental policy, and set priorities to improve the working environment and the overall environmental performance of enterprise.

29.11. Trade unions should:

(a) Seek to ensure that workers are able to participate in environmental audits at the workplace and in environmental impact assessments;

(b) Participate in environment and development activities within the local community and promote joint action on potential problems of common concern;

(c) Play an active role in the sustainable development activities of international and regional organizations, particularly within the United Nations system.

(c) Provide adequate training

29.12. Workers and their representatives should have access to adequate training to augment environmental awareness, ensure their safety and health, and improve their economic and social welfare. Such training should ensure that the necessary skills are available to promote sustainable livelihoods and improve the working environment. Trade unions, employers, Governments and international agencies should cooperate in assessing training needs within their respective spheres of activity. Workers and their representatives should be involved in the design and implementation of worker training programmes conducted by employers and Governments.

Means of implementation

(a) Financing and cost evaluation

29.13. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $300 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Capacity-building

29.14. Particular attention should be given to strengthening the capacity of each of the tripartite social partners (Governments and employers' and workers' organizations) to facilitate greater collaboration towards sustainable development.

Chapter 30

STRENGTHENING THE ROLE OF BUSINESS AND INDUSTRY

INTRODUCTION

30.1. Business and industry, including transnational corporations, play a crucial role in the social and economic development of a country. A stable policy regime enables and encourages business and industry to operate responsibly and efficiently and to implement longer-term policies. Increasing prosperity, a major goal of the development process, is contributed primarily by the activities of business and industry. Business enterprises, large and small, formal and informal, provide major trading, employment and livelihood opportunities. Business opportunities available to women are contributing towards their professional development, strengthening their economic role and transforming social systems. Business and industry, including transnational corporations, and their representative organizations should be full participants in the implementation and evaluation of activities related to Agenda 21.

30.2. Through more efficient production processes, preventive strategies, cleaner production technologies and procedures throughout the product life cycle, hence minimizing or avoiding wastes, the policies and operations of business and industry, including transnational corporations, can play a major role in reducing impacts on resource use and the environment. Technological innovations, development, applications, transfer and the more comprehensive aspects of partnership and cooperation are to a very large extent within the province of business and industry.

30.3. Business and industry, including transnational corporations, should recognize environmental management as among the highest corporate priorities and as a key determinant to sustainable development. Some enlightened leaders of enterprises are already implementing "responsible care" and product stewardship policies and programmes, fostering openness and dialogue with employees and the public and carrying out environmental audits and assessments of compliance. These leaders in business and industry, including transnational corporations, are increasingly taking voluntary initiatives, promoting and implementing self-regulations and greater responsibilities in ensuring their activities have minimal impacts on human health and the environment. The regulatory regimes introduced in many countries and the growing consciousness of consumers and the general public and enlightened leaders of business and industry, including transnational corporations, have all contributed to this. A positive contribution of business and industry, including transnational corporations, to sustainable development can increasingly be achieved by using economic instruments such as free market mechanisms in which the prices of goods and services should increasingly reflect the environmental costs of their input, production, use, recycling and disposal subject to country-specific conditions.

30.4. The improvement of production systems through technologies and processes that utilize resources more efficiently and at the same time produce less wastes - achieving more with less - is an important pathway towards sustainability for business and industry. Similarly, facilitating and encouraging inventiveness, competitiveness and voluntary initiatives are necessary for stimulating more varied, efficient and effective options. To address these major requirements and strengthen further the role of business and industry, including transnational corporations, the following two programmes are proposed.

PROGRAMME AREAS

A. Promoting cleaner production

Basis for action

30.5. There is increasing recognition that production, technology and management that use resources inefficiently form residues that are not reused, discharge wastes that have adverse impacts on human health and the environment and manufacture products that when used have further impacts and are difficult to recycle, need to be replaced with technologies, good engineering and management practices and know-how that would minimize waste throughout the product life cycle. The concept of cleaner production implies striving for optimal efficiencies at every stage of the product life cycle. A result would be the improvement of the overall competitiveness of the enterprise. The need for a transition towards cleaner production policies was recognized at the UNIDO-organized ministerial-level Conference on Ecologically Sustainable Industrial Development, held at Copenhagen in October 1991. 1/

Objectives

30.6. Governments, business and industry, including transnational corporations, should aim to increase the efficiency of resource utilization, including increasing the reuse and recycling of residues, and to reduce the quantity of waste discharge per unit of economic output.

Activities

30.7. Governments, business and industry, including transnational corporations, should strengthen partnerships to implement the principles and criteria for sustainable development.

30.8. Governments should identify and implement an appropriate mix of economic instruments and normative measures such as laws, legislations and standards, in consultation with business and industry, including transnational corporations, that will promote the use of cleaner production, with special consideration for small and medium-sized enterprises. Voluntary private initiatives should also be encouraged.

30.9. Governments, business and industry, including transnational corporations, academia and international organizations, should work towards the development and implementation of concepts and methodologies for the internalization of environmental costs into accounting and pricing mechanisms.

30.10. Business and industry, including transnational corporations, should be encouraged:

(a) To report annually on their environmental records, as well as on their use of energy and natural resources;

(b) To adopt and report on the implementation of codes of conduct promoting the best environmental practice, such as the Business Charter on Sustainable Development of the International Chamber of Commerce (ICC) and the chemical industry's responsible care initiative.

30.11. Governments should promote technological and know-how cooperation between enterprises, encompassing identification, assessment, research and development, management marketing and application of cleaner production.

30.12. Industry should incorporate cleaner production policies in its operations and investments, taking also into account its influence on suppliers and consumers.

30.13. Industry and business associations should cooperate with workers and trade unions to continuously improve the knowledge and skills for implementing sustainable development operations.

30.14. Industry and business associations should encourage individual companies to undertake programmes for improved environmental awareness and responsibility at all levels to make these enterprises dedicated to the task of improving environmental performance based on internationally accepted management practices.

30.15. International organizations should increase education, training and awareness activities relating to cleaner production, in collaboration with industry, academia and relevant national and local authorities.

30.16. International and non-governmental organizations, including trade and scientific associations, should strengthen cleaner production information dissemination by expanding existing databases, such as the UNEP International Cleaner Production Clearing House (ICPIC), the UNIDO Industrial and Technological Information Bank (INTIB) and the ICC International Environment Bureau (IEB), and should forge networking of national and international information systems.

B. Promoting responsible entrepreneurship

Basis for action

30.17. Entrepreneurship is one of the most important driving forces for innovations, increasing market efficiencies and responding to challenges and opportunities. Small and medium-sized entrepreneurs, in particular, play a very important role in the social and economic development of a country. Often, they are the major means for rural development, increasing off-farm employment and providing the transitional means for improving the livelihoods of women. Responsible entrepreneurship can play a major role in improving the efficiency of resource use, reducing risks and hazards, minimizing wastes and safeguarding environmental qualities.

Objectives

30.18. The following objectives are proposed:

(a) To encourage the concept of stewardship in the management and utilization of natural resources by entrepreneurs;

(b) To increase the number of entrepreneurs engaged in enterprises that subscribe to and implement sustainable development policies.

Activities

30.19. Governments should encourage the establishment and operations of sustainably managed enterprises. The mix would include regulatory measures, economic incentives and streamlining of administrative procedures to assure maximum efficiency in dealing with applications for approval in order to facilitate investment decisions, advice and assistance with information, infrastructural support and stewardship responsibilities.

30.20. Governments should encourage, in cooperation with the private sector, the establishment of venture capital funds for sustainable development projects and programmes.

30.21. In collaboration with business, industry, academia and international organizations, Governments should support training in the environmental aspects of enterprise management. Attention should also be directed towards apprenticeship schemes for youth.

30.22. Business and industry, including transnational corporations, should be encouraged to establish world-wide corporate policies on sustainable development, arrange for environmentally sound technologies to be available to affiliates owned substantially by their parent company in developing countries without extra external charges, encourage overseas affiliates to modify procedures in order to reflect local ecological conditions and share experiences with local authorities, national Governments and international organizations.

30.23. Large business and industry, including transnational corporations, should consider establishing partnership schemes with small and medium-sized enterprises to help facilitate the exchange of experience in managerial skills, market development and technological know-how, where appropriate, with the assistance of international organizations.

30.24. Business and industry should establish national councils for sustainable development and help promote entrepreneurship in the formal and informal sectors. The inclusion of women entrepreneurs should be facilitated.

30.25. Business and industry, including transnational corporations, should increase research and development of environmentally sound technologies and environmental management systems, in collaboration with academia and the scientific/engineering establishments, drawing upon indigenous knowledge, where appropriate.

30.26. Business and industry, including transnational corporations, should ensure responsible and ethical management of products and processes from the point of view of health, safety and environmental aspects. Towards this end, business and industry should increase self-regulation, guided by appropriate codes, charters and initiatives integrated into all elements of business planning and decision-making, and fostering openness and dialogue with employees and the public.

30.27. Multilateral and bilateral financial aid institutions should continue to encourage and support small- and medium-scale entrepreneurs engaged in sustainable development activities.

30.28. United Nations organizations and agencies should improve mechanisms for business and industry inputs, policy and strategy formulation processes, to ensure that environmental aspects are strengthened in foreign investment.

30.29. International organizations should increase support for research and development on improving the technological and managerial requirements for sustainable development, in particular for small and medium-sized enterprises in developing countries.

Means of implementation

Financing and cost evaluation

30.30. The activities included under this programme area are mostly changes in the orientation of existing activities and additional costs are not expected to be significant. The cost of activities by Governments and international organizations are already included in other programme areas.

Notes

1/ See A/CONF.151/PC/125.

Chapter 31

SCIENTIFIC AND TECHNOLOGICAL COMMUNITY

INTRODUCTION

31.1. The present chapter focuses on how to enable the scientific and technological community, which includes, among others, engineers, architects, industrial designers, urban planners and other professionals and policy makers, to make a more open and effective contribution to the decision-making processes concerning environment and development. It is important that the role of science and technology in human affairs be more widely known and better understood, both by decision makers who help determine public policy and by the general public. The cooperative relationship existing between the scientific and technological community and the general public should be extended and deepened into a full partnership. Improved communication and cooperation between the scientific and technological community and decision makers will facilitate greater use of scientific and technical information and knowledge in policies and programme implementation. Decision makers should create more favourable conditions for improving training and independent research in sustainable development. Existing multidisciplinary approaches will have to be strengthened and more interdisciplinary studies developed between the scientific and technological community and policy makers and with the general public to provide leadership and practical know-how to the concept of sustainable development. The public should be assisted in communicating their sentiments to the scientific and technological community concerning how science and technology might be better managed to affect their lives in a beneficial way. By the same token, the independence of the scientific and technological community to investigate and publish without restriction and to exchange their findings freely must be assured. The adoption and implementation of ethical principles and codes of practice for the scientific and technological community that are internationally accepted could enhance professionalism and may improve and hasten recognition of the value of its contributions to environment and development, recognizing the continuing evolution and uncertainty of scientific knowledge.

PROGRAMME AREAS

A. Improving communication and cooperation among the scientific and technological community, decision makers and the public

Basis for action

31.2. The scientific and technological community and policy makers should increase their interaction in order to implement strategies for sustainable development on the basis of the best available knowledge. This implies that decision makers should provide the necessary framework for rigorous research

and for full and open communication of the findings of the scientific and technological community, and develop with it ways in which research results and the concerns stemming from the findings can be communicated to decision-making bodies so as to better link scientific and technical knowledge with strategic policy and programme formulation. At the same time, this dialogue would assist the scientific and technological community in developing priorities for research and proposing actions for constructive solutions.

Objectives

31.3. The following objectives are proposed:

(a) To extend and open up the decision-making process and broaden the range of developmental and environmental issues where cooperation at all levels between the scientific and technological community and decision makers can take place;

(b) To improve the exchange of knowledge and concerns between the scientific and technological community and the general public in order to enable policies and programmes to be better formulated, understood and supported.

Activities

31.4. Governments should undertake the following activities:

(a) Review how national scientific and technological activities could be more responsive to sustainable development needs as part of an overall effort to strengthen national research and development systems, including through strengthening and widening the membership of national scientific and technological advisory councils, organizations and committees to ensure that:

(i) The full range of national needs for scientific and technological programmes are communicated to Governments and the public;

(ii) The various strands of public opinion are represented;

(b) Promote regional cooperative mechanisms to address regional needs for sustainable development. Such regional cooperative mechanisms could be facilitated through public/private partnerships and provide support to Governments, industry, non-governmental educational institutions and other domestic and international organizations, and by strengthening global professional networks;

(c) Improve and expand scientific and technical inputs through appropriate mechanisms to intergovernmental consultative, cooperative and negotiating processes towards international and regional agreements;

(d) Strengthen science and technology advice to the highest levels of the United Nations, and other international institutions, in order to ensure

the inclusion of science and technology know-how in sustainable development policies and strategies;

(e) Improve and strengthen programmes for disseminating research results of universities and research institutions. This requires recognition of and greater support to the scientists, technologists and teachers who are engaged in communicating and interpreting scientific and technological information to policy makers, professionals in other fields and the general public. Such support should focus on the transfer of skills and the transfer and adaptation of planning techniques. This requires full and open sharing of data and information among scientists and decision makers. The publication of national scientific research reports and technical reports that are understandable and relevant to local sustainable development needs would also improve the interface between science and decision-making, as well as the implementation of scientific results;

(f) Improve links between the official and independent research sectors and industry so that research may become an important element of industrial strategy;

(g) Promote and strengthen the role of women as full partners in the science and technology disciplines;

(h) Develop and implement information technologies to enhance the dissemination of information for sustainable development.

Means of implementation

(a) Financing and cost evaluation

31.5. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $15 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Capacity-building

31.6. Intergovernmental panels on development and environmental issues should be organized, with emphasis on their scientific and technical aspects, and studies of responsiveness and adaptability included in subsequent programmes of action.

B. Promoting codes of practice and guidelines related to science and technology

Basis for action

31.7. Scientists and technologists have a special set of responsibilities which belong to them both as inheritors of a tradition and as professionals and members of disciplines devoted to the search for knowledge and to the need to protect the biosphere in the context of sustainable development.

31.8. Increased ethical awareness in environmental and developmental decision-making should help to place appropriate priorities for the maintenance and enhancement of life-support systems for their own sake, and in so doing ensure that the functioning of viable natural processes is properly valued by present and future societies. Therefore, a strengthening of the codes of practice and guidelines for the scientific and technological community would increase environmental awareness and contribute to sustainable development. It would build up the level of esteem and regard for the scientific and technological community and facilitate the "accountability" of science and technology.

Objectives

31.9. The objective should be to develop, improve and promote international acceptance of codes of practice and guidelines relating to science and technology in which the integrity of life-support systems is comprehensively accounted for and where the important role of science and technology in reconciling the needs of environment and development is accepted. To be effective in the decision-making process, such principles, codes of practice and guidelines must not only be agreed upon by the scientific and technological community, but also recognized by the society as a whole.

Activities

31.10. The following activities could be undertaken:

(a) Strengthening national and international cooperation, including the non-governmental sector, to develop codes of practice and guidelines regarding environmentally sound and sustainable development, taking into account the Rio Declaration and existing codes of practice and guidelines;

(b) Strengthening and establishing national advisory groups on environmental and developmental ethics, in order to develop a common value framework between the scientific and technological community and society as a whole, and promote continuous dialogue;

(c) Extending education and training in developmental and environmental ethical issues to integrate such objectives into education curricula and research priorities;

(d) Reviewing and amending relevant national and international environment and development legal instruments to ensure appropriate codes of practice and guidelines are incorporated into such regulatory machinery.

Means of implementation

(a) Financing and cost evaluation

31.11. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $5 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Capacity-building

31.12. Codes of practice and guidelines, including on appropriate principles, should be developed for and by the scientific and technological community in the pursuit of its research activities and implementation of programmes aimed at sustainable development.

Chapter 32

STRENGTHENING THE ROLE OF FARMERS*

PROGRAMME AREA

Basis for action

32.1. Agriculture occupies one third of the land surface of the Earth, and is the central activity for much of the world's population. Rural activities take place in close contact with nature, adding value to it by producing renewable resources, while at the same time becoming vulnerable to overexploitation and improper management.

32.2. The rural household, indigenous people and their communities, and the family farmer, a substantial number of whom are women, have been the stewards of much of the Earth's resources. Farmers must conserve their physical environment as they depend on it for their sustenance. Over the past 20 years there has been impressive increase in aggregate agricultural production. Yet, in some regions, this increase has been outstripped by population growth or international debt or falling commodity prices. Further, the natural resources that sustain farming activity need proper care, and there is a growing concern about the sustainability of agricultural production systems.

32.3. A farmer-centred approach is the key to the attainment of sustainability in both developed and developing countries and many of the programme areas in Agenda 21 address this objective. A significant number of the rural population in developing countries depend primarily upon small-scale, subsistence-oriented agriculture based on family labour. However, they have limited access to resources, technology, alternative livelihood and means of production. As a result, they are engaged in the overexploitation of natural resources, including marginal lands.

32.4. The sustainable development of people in marginal and fragile ecosystems is also addressed in Agenda 21. The key to the successful implementation of these programmes lies in the motivation and attitudes of individual farmers and government policies that would provide incentives to farmers to manage their natural resources efficiently and in a sustainable way. Farmers, particularly women, face a high degree of economic, legal and institutional uncertainties when investing in their land and other resources. The decentralization of decision-making towards local and community organizations is the key in changing people's behaviour and implementing

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* In this chapter, all references to "farmers" include all rural people who derive their livelihood from activities such as farming, fishing and forest harvesting. The term "farming" also includes fishing and forest harvesting.

sustainable farming strategies. This programme area deals with activities which can contribute to this end.

Objectives

32.5. The following objectives are proposed:

(a) To encourage a decentralized decision-making process through the creation and strengthening of local and village organizations that would delegate power and responsibility to primary users of natural resources;

(b) To support and enhance the legal capacity of women and vulnerable groups with regard to access, use and tenure of land;

(c) To promote and encourage sustainable farming practices and technologies;

(d) To introduce or strengthen policies that would encourage self-sufficiency in low-input and low-energy technologies, including indigenous practices, and pricing mechanisms that internalize environmental costs;

(e) To develop a policy framework that provides incentives and motivation among farmers for sustainable and efficient farming practices;

(f) To enhance the participation of farmers, men and women, in the design and implementation of policies directed towards these ends, through their representative organizations.

Activities

(a) Management-related activities

32.6. National Governments should:

(a) Ensure the implementation of the programmes on sustainable livelihoods, agriculture and rural development, managing fragile ecosystems, water use in agriculture, and integrated management of natural resources;

(b) Promote pricing mechanisms, trade policies, fiscal incentives and other policy instruments that positively affect individual farmer's decisions about an efficient and sustainable use of natural resources, and take full account of the impact of these decisions on household food security, farm incomes, employment and the environment;

(c) Involve farmers and their representative organizations in the formulation of policy;

(d) Protect, recognize and formalize women's access to tenure and use of land, as well as rights to land, access to credit, technology, inputs and training;

(e) Support the formation of farmers' organizations by providing adequate legal and social conditions.

32.7. Support for farmers' organizations could be arranged as follows:

(a) National and international research centres should cooperate with farmers' organizations in developing location-specific environment-friendly farming techniques;

(b) National Governments, multilateral and bilateral development agencies and non-governmental organizations should collaborate with farmers' organizations in formulating agricultural development projects to specific agro-ecological zones.

(b) Data and information

32.8. Governments and farmers' organizations should:

(a) Initiate mechanisms to document, synthesize and disseminate local knowledge, practices and project experiences so that they will make use of the lessons of the past when formulating and implementing policies affecting farming, forest and fishing populations;

(b) Establish networks for the exchange of experiences with regard to farming that help to conserve land, water and forest resources, minimize the use of chemicals and reduce or reutilize farm wastes;

(c) Develop pilot projects and extension services that would seek to build on the needs and knowledge base of women farmers.

(c) International and regional cooperation

32.9. FAO, IFAD, WFP, the World Bank, the regional development banks and other international organizations involved in rural development should involve farmers and their representatives in their deliberations, as appropriate.

32.10. Representative organizations of farmers should establish programmes for the development and support of farmers' organizations, particularly in developing countries.

Means of implementation

(a) Financing and cost evaluation

32.11. The financing needed for this programme area is estimated in chapter 14 (Promoting sustainable agriculture and rural development), particularly in the programme area entitled "Ensuring people's participation and promoting human resource development for sustainable agriculture". The costs shown under chapters 3 (Combating poverty), 12 (Managing fragile ecosystems: combating desertification and drought), and 13 (Managing fragile

ecosystems: sustainable mountain development) are also relevant to this programme area.

(b) Scientific and technological means

32.12. Governments and appropriate international organizations, in collaboration with national research organizations and non-governmental organizations should, as appropriate:

(a) Develop environmentally sound farming technologies that enhance crop yields, maintain land quality, recycle nutrients, conserve water and energy and control pests and weeds;

(b) Conduct studies of high-resource and low-resource agriculture to compare their productivity and sustainability. The research should preferably be conducted under various environmental and sociological settings;

(c) Support research on mechanization that would optimize human labour and animal power and hand-held and animal-drawn equipment that can be easily operated and maintained. The development of farm technologies should take into account farmers' available resources and the role of animals in farming households and the ecology.

(c) Human resource development

32.13. Governments, with the support of multilateral and bilateral development agencies and scientific organizations, should develop curricula for agricultural colleges and training institutions that would integrate ecology into agricultural science. Interdisciplinary programmes in agricultural ecology are essential to the training of a new generation of agricultural scientists and field-level extension agents.

(d) Capacity-building

32.14. Governments should, in the light of each country's specific situation:

(a) Create the institutional and legal mechanisms to ensure effective land tenure to farmers. The absence of legislation indicating land rights has been an obstacle in taking action against land degradation in many farming communities in developing countries;

(b) Strengthen rural institutions that would enhance sustainability through locally managed credit systems and technical assistance, local production and distribution facilities for inputs, appropriate equipment and small-scale processing units, and marketing and distribution systems;

(c) Establish mechanisms to increase access of farmers, in particular women and farmers from indigenous groups, to agricultural training, credit and use of improved technology for ensuring food security.

SECTION IV. MEANS OF IMPLEMENTATION

Chapter 33

FINANCIAL RESOURCES AND MECHANISMS

INTRODUCTION

33.1. The General Assembly, in resolution 44/228 of 22 December 1989, inter alia, decided that the United Nations Conference on Environment and Development should:

> Identify ways and means of providing new and additional financial resources, particularly to developing countries, for environmentally sound development programmes and projects in accordance with national development objectives, priorities and plans and to consider ways of effectively monitoring the provision of such new and additional financial resources, particularly to developing countries, so as to enable the international community to take further appropriate action on the basis of accurate and reliable data;
>
> Identify ways and means of providing additional financial resources for measures directed towards solving major environmental problems of global concern and especially of supporting those countries, in particular developing countries, for which the implementation of such measures would entail a special or abnormal burden, owing, in particular, to their lack of financial resources, expertise or technical capacity;
>
> Consider various funding mechanisms, including voluntary ones, and examine the possibility of a special international fund and other innovative approaches, with a view to ensuring, on a favourable basis, the most effective and expeditious transfer of environmentally sound technologies to developing countries;
>
> Quantify the financial requirements for the successful implementation of Conference decisions and recommendations and identify possible sources, including innovative ones, of additional resources.

33.2. This chapter deals with the financing of the implementation of Agenda 21, which reflects a global consensus integrating environmental considerations into an accelerated development process. For each of the other chapters, the secretariat of the Conference has provided indicative estimates of the total costs of implementation for developing countries and the requirements for grant or other concessional financing needed from the international community. These reflect the need for a substantially increased effort, both by countries themselves and by the international community.

33.3. Economic growth, social development and poverty eradication are the first and overriding priorities in developing countries and are themselves essential to meeting national and global sustainability objectives. In the light of the global benefits to be realized by the implementation of Agenda 21 as a whole, the provision to developing countries of effective means, inter alia, financial resources and technology, without which it will be difficult for them to fully implement their commitments, will serve the common interests of developed and developing countries and of humankind in general, including future generations.

33.4. The cost of inaction could outweigh the financial costs of implementing Agenda 21. Inaction will narrow the choices of future generations.

33.5. For dealing with environmental issues, special efforts will be required. Global and local environmental issues are interrelated. The United Nations Framework Convention on Climate Change and the Convention on Biological Diversity address two of the most important global issues.

33.6. Economic conditions, both domestic and international, that encourage free trade and access to markets will help make economic growth and environmental protection mutually supportive for all countries, particularly for developing countries and countries undergoing the process of transition to a market economy (see chapter 2 for a fuller discussion of these issues).

33.7. International cooperation for sustainable development should also be strengthened in order to support and complement the efforts of developing countries, particularly the least developed countries.

33.8. All countries should assess how to translate Agenda 21 into national policies and programmes through a process that will integrate environment and development considerations. National and local priorities should be established by means that include public participation and community involvement, promoting equal opportunity for men and women.

33.9. For an evolving partnership among all countries of the world, including, in particular, between developed and developing countries, sustainable development strategies and enhanced and predictable levels of funding in support of longer term objectives are required. For that purpose, developing countries should articulate their own priority actions and needs for support and developed countries should commit themselves to addressing these priorities. In this respect, consultative groups and round tables and other nationally based mechanisms can play a facilitative role.

33.10. The implementation of the huge sustainable development programmes of Agenda 21 will require the provision to developing countries of substantial new and additional financial resources. Grant or concessional financing should be provided according to sound and equitable criteria and indicators. The progressive implementation of Agenda 21 should be matched by the provision

of such necessary financial resources. The initial phase will be accelerated by substantial early commitments of concessional funding.

OBJECTIVES

33.11. The objectives are as follows:

(a) To establish measures concerning financial resources and mechanisms for the implementation of Agenda 21;

(b) To provide new and additional financial resources that are both adequate and predictable;

(c) To seek full use and continuing qualitative improvement of funding mechanisms to be utilized for the implementation of Agenda 21.

ACTIVITIES

33.12. Fundamentally, the activities of this chapter are related to the implementation of all the other chapters of Agenda 21.

MEANS OF IMPLEMENTATION

33.13. In general, the financing for the implementation of Agenda 21 will come from a country's own public and private sectors. For developing countries, particularly the least developed countries, ODA is a main source of external funding, and substantial new and additional funding for sustainable development and implementation of Agenda 21 will be required. Developed countries reaffirm their commitments to reach the accepted United Nations target of 0.7 per cent of GNP for ODA and, to the extent that they have not yet achieved that target, agree to augment their aid programmes in order to reach that target as soon as possible and to ensure prompt and effective implementation of Agenda 21. Some countries have agreed to reach the target by the year 2000. It was decided that the Commission on Sustainable Development would regularly review and monitor progress towards this target. This review process should systematically combine the monitoring of the implementation of Agenda 21 with a review of the financial resources available. Those countries that have already reached the target are to be commended and encouraged to continue to contribute to the common effort to make available the substantial additional resources that have to be mobilized. Other developed countries, in line with their support for reform efforts in developing countries, agree to make their best efforts to increase their level of ODA. In this context, the importance of equitable burden-sharing among developed countries is recognized. Other countries, including those undergoing the process of transition to a market economy, may voluntarily augment the contributions of the developed countries.

33.14. Funding for Agenda 21 and other outcomes of the Conference should be provided in a way that maximizes the availability of new and additional resources and uses all available funding sources and mechanisms. These include, among others:

(a) The multilateral development banks and funds:

(i) The International Development Association (IDA). Among the various issues and options that IDA deputies will examine in connection with the forthcoming tenth replenishment of IDA, the statement made by the President of the World Bank at the United Nations Conference on Environment and Development should be given special consideration in order to help the poorest countries meet their sustainable development objectives as contained in Agenda 21;

(ii) Regional and subregional development banks. The regional and subregional development banks and funds should play an increased and more effective role in providing resources on concessional or other favourable terms needed to implement Agenda 21;

(iii) The Global Environment Facility, managed jointly by the World Bank, UNDP and UNEP, whose additional grant and concessional funding is designed to achieve global environmental benefits, should cover the agreed incremental costs of relevant activities under Agenda 21, in particular for developing countries. Therefore, it should be restructured so as to, inter alia:

Encourage universal participation;

Have sufficient flexibility to expand its scope and coverage to relevant programme areas of Agenda 21, with global environmental benefits, as agreed;

Ensure a governance that is transparent and democratic in nature, including in terms of decision-making and operations, by guaranteeing a balanced and equitable representation of the interests of developing countries and giving due weight to the funding efforts of donor countries;

Ensure new and additional financial resources on grant and concessional terms, in particular to developing countries;

Ensure predictability in the flow of funds by contributions from developed countries, taking into account the importance of equitable burden-sharing;

Ensure access to and disbursement of the funds under mutually agreed criteria without introducing new forms of conditionality;

(b) The relevant specialized agencies, other United Nations bodies and other international organizations, which have designated roles to play in supporting national Governments in implementing Agenda 21;

(c) Multilateral institutions for capacity-building and technical cooperation. Necessary financial resources should be provided to UNDP to use its network of field offices and its broad mandate and experience in the field of technical cooperation for facilitating capacity-building at the country level, making full use of the expertise of the specialized agencies and other United Nations bodies within their respective areas of competence, in particular UNEP and including the multilateral and regional development banks;

(d) Bilateral assistance programmes. These programmes will need to be strengthened in order to promote sustainable development;

(e) Debt relief. It is important to achieve durable solutions to the debt problems of low- and middle-income developing countries in order to provide them with the needed means for sustainable development. Measures to address the continuing debt problems of low- and middle-income countries should be kept under review. All creditors in the Paris Club should promptly implement the agreement of December 1991 to provide debt relief for the poorest heavily indebted countries pursuing structural adjustment; debt relief measures should be kept under review so as to address the continuing difficulties of those countries;

(f) Private funding. Voluntary contributions through non-governmental channels, which have been running at about 10 per cent of ODA, might be increased.

33.15. Investment. Mobilization of higher levels of foreign direct investment and technology transfers should be encouraged through national policies that promote investment and through joint ventures and other modalities.

33.16. Innovative financing. New ways of generating new public and private financial resources should be explored, in particular:

(a) Various forms of debt relief, apart from official or Paris Club debt, including greater use of debt swaps;

(b) The use of economic and fiscal incentives and mechanisms;

(c) The feasibility of tradeable permits;

(d) New schemes for fund-raising and voluntary contributions through private channels, including non-governmental organizations;

(e) The reallocation of resources at present committed to military purposes.

33.17. A supportive international and domestic economic climate conducive to sustained economic growth and development is important, particularly for developing countries, in order to achieve sustainability.

33.18. The secretariat of the Conference has estimated the average annual costs (1993-2000) of implementing in developing countries the activities in Agenda 21 to be over $600 billion, including about $125 billion on grant or concessional terms from the international community. These are indicative and order-of-magnitude estimates only, and have not been reviewed by Governments. Actual costs will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

33.19. Developed countries and others in a position to do so should make initial financial commitments to give effect to the decisions of the Conference. They should report on such plans and commitments to the United Nations General Assembly at its forty-seventh session, in 1992.

33.20. Developing countries should also begin to draw up national plans for sustainable development to give effect to the decisions of the Conference.

33.21. Review and monitoring of the financing of Agenda 21 is essential. Questions related to the effective follow-up of the Conference are discussed in chapter 38 (International institutional arrangements). It will be important to review on a regular basis the adequacy of funding and mechanisms, including efforts to reach agreed objectives of the present chapter, including targets where applicable.

Chapter 34

TRANSFER OF ENVIRONMENTALLY SOUND TECHNOLOGY, COOPERATION AND CAPACITY-BUILDING

INTRODUCTION

34.1. Environmentally sound technologies protect the environment, are less polluting, use all resources in a more sustainable manner, recycle more of their wastes and products, and handle residual wastes in a more acceptable manner than the technologies for which they were substitutes.

34.2. Environmentally sound technologies in the context of pollution are "process and product technologies" that generate low or no waste, for the prevention of pollution. They also cover "end of the pipe" technologies for treatment of pollution after it has been generated.

34.3. Environmentally sound technologies are not just individual technologies, but total systems which include know-how, procedures, goods and services, and equipment as well as organizational and managerial procedures. This implies that when discussing transfer of technologies, the human resource development and local capacity-building aspects of technology choices, including gender-relevant aspects, should also be addressed. Environmentally sound technologies should be compatible with nationally determined socio-economic, cultural and environmental priorities.

34.4. There is a need for favourable access to and transfer of environmentally sound technologies, in particular to developing countries, through supportive measures that promote technology cooperation and that should enable transfer of necessary technological know-how as well as building up of economic, technical, and managerial capabilities for the efficient use and further development of transferred technology. Technology cooperation involves joint efforts by enterprises and Governments, both suppliers of technology and its recipients. Therefore, such cooperation entails an iterative process involving government, the private sector, and research and development facilities to ensure the best possible results from transfer of technology. Successful long-term partnerships in technology cooperation necessarily require continuing systematic training and capacity-building at all levels over an extended period of time.

34.5. The activities proposed in this chapter aim at improving conditions and processes on information, access to and transfer of technology (including the state-of-the-art technology and related know-how), in particular to developing countries, as well as on capacity-building and cooperative arrangements and partnerships in the field of technology, in order to promote sustainable development. New and efficient technologies will be essential to increase the capabilities, in particular of developing countries, to achieve sustainable development, sustain the world's economy, protect the environment, and

alleviate poverty and human suffering. Inherent in these activities is the need to address the improvement of technology currently used and its replacement, when appropriate, with more accessible and more environmentally sound technology.

BASIS FOR ACTION

34.6. This chapter of Agenda 21 is without prejudice to specific commitments and arrangements on transfer of technology to be adopted in specific international instruments.

34.7. The availability of scientific and technological information and access to and transfer of environmentally sound technology are essential requirements for sustainable development. Providing adequate information on the environmental aspects of present technologies consists of two interrelated components: upgrading information on present and state-of-the-art technologies, including their environmental risks, and improving access to environmentally sound technologies.

34.8. The primary goal of improved access to technology information is to enable informed choices, leading to access to and transfer of such technologies and the strengthening of countries' own technological capabilities.

34.9. A large body of useful technological knowledge lies in the public domain. There is a need for the access of developing countries to such technologies as are not covered by patents or lie in the public domain. Developing countries would also need to have access to the know-how and expertise required for the effective utilization of the aforesaid technologies.

34.10. Consideration must be given to the role of patent protection and intellectual property rights along with an examination of their impact on the access to and transfer of environmentally sound technology, in particular to developing countries, as well as to further exploring efficiently the concept of assured access for developing countries to environmentally sound technology in its relation to proprietary rights with a view to developing effective responses to the needs of developing countries in this area.

34.11. Proprietary technology is available through commercial channels, and international business is an important vehicle for technology transfer. Tapping this pool of knowledge and recombining it with local innovations to generate alternative technologies should be pursued. At the same time that concepts and modalities for assured access to environmentally sound technologies, including state-of-the-art technologies, in particular by developing countries, continued to be explored, enhanced access to environmentally sound technologies should be promoted, facilitated and financed as appropriate, while providing fair incentives to innovators that promote research and development of new environmentally sound technologies.

34.12. Recipient countries require technology and strengthened support to help further develop their scientific, technological, professional and related capacities, taking into account existing technologies and capacities. This support would enable countries, in particular developing countries, to make more rational technology choices. These countries could then better assess environmentally sound technologies prior to their transfer and properly apply and manage them, as well as improve upon already existing technologies and adapt them to suit their specific development needs and priorities.

34.13. A critical mass of research and development capacity is crucial to the effective dissemination and use of environmentally sound technologies and their generation locally. Education and training programmes should reflect the needs of specific goal-oriented research activities and should work to produce specialists literate in environmentally sound technology and with an interdisciplinary outlook. Achieving this critical mass involves building the capabilities of craftspersons, technicians and middle-level managers, scientists, engineers and educators, as well as developing their corresponding social or managerial support systems. Transferring environmentally sound technologies also involves innovatively adapting and incorporating them into the local or national culture.

OBJECTIVES

34.14. The following objectives are proposed:

(a) To help to ensure the access, in particular of developing countries, to scientific and technological information, including information on state-of-the-art technologies;

(b) To promote, facilitate, and finance, as appropriate, the access to and the transfer of environmentally sound technologies and corresponding know-how, in particular to developing countries, on favourable terms, including on concessional and preferential terms, as mutually agreed, taking into account the need to protect intellectual property rights as well as the special needs of developing countries for the implementation of Agenda 21;

(c) To facilitate the maintenance and promotion of environmentally sound indigenous technologies that may have been neglected or displaced, in particular in developing countries, paying particular attention to their priority needs and taking into account the complementary roles of men and women;

(d) To support endogenous capacity-building, in particular in developing countries, so they can assess, adopt, manage and apply environmentally sound technologies. This could be achieved through inter alia:

(i) Human resource development;

(ii) Strengthening of institutional capacities for research and development and programme implementation;

(iii) Integrated sector assessments of technology needs, in accordance with countries' plans, objectives and priorities as foreseen in the implementation of Agenda 21 at the national level;

(e) To promote long-term technological partnerships between holders of environmentally sound technologies and potential users.

ACTIVITIES

(a) Development of international information networks which link national, subregional, regional and international systems

34.15. Existing national, subregional, regional and international information systems should be developed and linked through regional clearing-houses covering broad-based sectors of the economy such as agriculture, industry and energy. Such a network might, inter alia, include national, subregional and regional patent offices that are equipped to produce reports on state-of-the-art technology. The clearing-house networks would disseminate information on available technologies, their sources, their environmental risks, and the broad terms under which they may be acquired. They would operate on an information-demand basis and focus on the information needs of the end-users. They would take into account the positive roles and contributions of international, regional and subregional organizations, business communities, trade associations, non-governmental organizations, national Governments, and newly established or strengthened national networks.

34.16. The international and regional clearing-houses would take the initiative, where necessary, in helping users to identify their needs and in disseminating information that meets those needs, including the use of existing news, public information, and communication systems. The disseminated information would highlight and detail concrete cases where environmentally sound technologies were successfully developed and implemented. In order to be effective, the clearing-houses need to provide not only information, but also referrals to other services, including sources of advice, training, technologies and technology assessment. The clearing-houses would thus facilitate the establishment of joint ventures and partnerships of various kinds.

34.17. An inventory of existing and international or regional clearing-houses or information exchange systems should be undertaken by the relevant United Nations bodies. The existing structure should be strengthened and improved when necessary. Additional information systems should be developed, if necessary, in order to fill identified gaps in this international network.

(b) Support of and promotion of access to transfer of technology

34.18. Governments and international organizations should promote, and encourage the private sector to promote, effective modalities for the access and transfer, in particular to developing countries, of environmentally sound technologies by means of activities, including the following:

(a) Formulation of policies and programmes for the effective transfer of environmentally sound technologies that are publicly owned or in the public domain;

(b) Creation of favourable conditions to encourage the private and public sectors to innovate, market and use environmentally sound technologies;

(c) Examination by Governments and, where appropriate, by relevant organizations of existing policies, including subsidies and tax policies, and regulations to determine whether they encourage or impede the access to, transfer of and introduction of environmentally sound technologies;

(d) Addressing, in a framework which fully integrates environment and development, barriers to the transfer of privately owned environmentally sound technologies and adoption of appropriate general measures to reduce such barriers while creating specific incentives, fiscal or otherwise, for the transfer of such technologies;

(e) In the case of privately owned technologies, the adoption of the following measures, in particular for developing countries:

(i) Creation and enhancement by developed countries, as well as other countries which might be in a position to do so, of appropriate incentives, fiscal or otherwise, to stimulate the transfer of environmentally sound technology by companies, in particular to developing countries, as integral to sustainable development;

(ii) Enhancement of the access to and transfer of patent protected environmentally sound technologies, in particular to developing countries;

(iii) Purchase of patents and licences on commercial terms for their transfer to developing countries on non-commercial terms as part of development cooperation for sustainable development, taking into account the need to protect intellectual property rights;

(iv) In compliance with and under the specific circumstances recognized by the relevant international conventions adhered to by States, the undertaking of measures to prevent the abuse of intellectual property rights, including rules with respect to their acquisition through compulsory licensing, with the provision of equitable and adequate compensation;

(v) Provision of financial resources to acquire environmentally sound technologies in order to enable in particular developing countries to implement measures to promote sustainable development that would entail a special or abnormal burden to them;

(f) Development of mechanisms for the access to and transfer of environmentally sound technologies, in particular to developing countries,

while taking into account development in the process of negotiating an international code of conduct on transfer of technology, as decided by UNCTAD at its eighth session, held at Cartagena de Indias, Colombia, in February 1992.

(c) Improvement of the capacity to develop and manage environmentally sound technologies

34.19. Frameworks at subregional, regional and international levels should be established and/or strengthened for the development, transfer and application of environmentally sound technologies and corresponding technical know-how with a special focus on developing countries' needs, by adding such functions to already existing bodies. Such frameworks would facilitate initiatives from both developing and developed countries to stimulate the research, development and transfer of environmentally sound technologies, often through partnerships within and among countries and between the scientific and technological community, industry and Governments.

34.20. National capacities to assess, develop, manage and apply new technologies should be developed. This will require strengthening existing institutions, training of personnel at all levels, and education of the end-user of the technology.

(d) Establishment of a collaborative network of research centres

34.21. A collaborative network of national, subregional, regional and international research centres on environmentally sound technology should be established to enhance the access to and development, management and transfer of environmentally sound technologies, including transfer and cooperation among developing countries and between developed and developing countries, primarily based on existing subregional or regional research, development and demonstration centres which are linked with the national institutions, in close cooperation with the private sector.

(e) Support for programmes of cooperation and assistance

34.22. Support should be provided for programmes of cooperation and assistance, including those provided by United Nations agencies, international organizations, and other appropriate public and private organizations, in particular to developing countries, in the areas of research and development, technological and human resources capacity-building in the fields of training, maintenance, national technology needs assessments, environmental impact assessments, and sustainable development planning.

34.23. Support should also be provided for national, subregional, regional, multilateral and bilateral programmes of scientific research, dissemination of information and technology development among developing countries, including through the involvement of both public and private enterprises and research facilities, as well as funding for technical cooperation among developing countries' programmes in this area. This should include developing links among these facilities to maximize their efficiency in understanding, disseminating and implementing technologies for sustainable development.

34.24. The development of global, regional and subregional programmes should include identification and evaluation of regional, subregional and national need-based priorities. Plans and studies supporting these programmes should provide the basis for potential financing by multilateral development banks, bilateral organizations, private sector interests and non-governmental organizations.

34.25. Visits should be sponsored and, on a voluntary basis, the return of qualified experts from developing countries in the field of environmentally sound technologies who are currently working in developed country institutions should be facilitated.

(f) Technology assessment in support of the management of environmentally sound technology

34.26. The international community, in particular United Nations agencies, international organizations, and other appropriate and private organizations should help exchange experiences and develop capacity for technology needs assessment, in particular in developing countries, to enable them to make choices based on environmentally sound technologies. They should:

(a) Build up technology assessment capacity for the management of environmentally sound technology, including environmental impact and risk assessment, with due regard to appropriate safeguards on the transfer of technologies subject to prohibition on environmental or health grounds;

(b) Strengthen the international network of regional, subregional or national environmentally sound technology assessment centres, coupled with clearing-houses, to tap the technology assessment sources mentioned above for the benefit of all nations. These centres could, in principle, provide advice and training for specific national situations and promote the building up of national capacity in environmentally sound technology assessment. The possibility of assigning this activity to already existing regional organizations should be fully explored before creating entirely new institutions, and funding of this activity through public-private partnerships should also be explored, as appropriate.

(g) Collaborative arrangements and partnerships

34.27. Long-term collaborative arrangements should be promoted between enterprises of developed and developing countries for the development of environmentally sound technologies. Multinational companies, as repositories of scarce technical skills needed for the protection and enhancement of the environment, have a special role and interest in promoting cooperation in and related to technology transfer, as they are important channels for such transfer, and for building a trained human resource pool and infrastructure.

34.28. Joint ventures should be promoted between suppliers and recipients of technologies, taking into account developing countries' policy priorities and objectives. Together with direct foreign investment, these ventures could

constitute important channels of transferring environmentally sound technologies. Through such joint ventures and direct investment, sound environmental management practices could be transferred and maintained.

MEANS OF IMPLEMENTATION

Financing and cost evaluation

34.29. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this chapter to be between $450 million and $600 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

Chapter 35

SCIENCE FOR SUSTAINABLE DEVELOPMENT

INTRODUCTION

35.1. This chapter focuses on the role and the use of the sciences in supporting the prudent management of the environment and development for the daily survival and future development of humanity. The programme areas proposed herein are intended to be over-arching, in order to support the specific scientific requirements identified in the other Agenda 21 chapters. One role of the sciences should be to provide information to better enable formulation and selection of environment and development policies in the decision-making process. In order to fulfil this requirement, it will be essential to enhance scientific understanding, improve long-term scientific assessments, strengthen scientific capacities in all countries and ensure that the sciences are responsive to emerging needs.

35.2. Scientists are improving their understanding in areas such as climatic change, growth in rates of resource consumption, demographic trends, and environmental degradation. Changes in those and other areas need to be taken into account in working out long-term strategies for development. A first step towards improving the scientific basis for these strategies is a better understanding of land, oceans, atmosphere and their interlocking water, nutrient and biogeochemical cycles and energy flows which all form part of the Earth system. This is essential if a more accurate estimate is to be provided of the carrying capacity of the planet Earth and of its resilience under the many stresses placed upon it by human activities. The sciences can provide this understanding through increased research into the underlying ecological processes and through the application of modern, effective and efficient tools that are now available, such as remote-sensing devices, robotic monitoring instruments and computing and modelling capabilities. The sciences are playing an important role in linking the fundamental significance of the Earth system as life support to appropriate strategies for development which build on its continued functioning. The sciences should continue to play an increasing role in providing for an improvement in the efficiency of resource utilization and in finding new development practices, resources, and alternatives. There is a need for the sciences constantly to reassess and promote less intensive trends in resource utilization, including less intensive utilization of energy in industry, agriculture, and transportation. Thus, the sciences are increasingly being understood as an essential component in the search for feasible pathways towards sustainable development.

35.3. Scientific knowledge should be applied to articulate and support the goals of sustainable development, through scientific assessments of current conditions and future prospects for the Earth system. Such assessments, based on existing and emerging innovations within the sciences, should be used in the decision-making process and in the interactive processes between the sciences and policy-making. There needs to be an increased output from the

sciences in order to enhance understanding and facilitate interaction between science and society. An increase in the scientific capacity and capability to achieve these goals will also be required, particularly in developing countries. Of crucial importance is the need for scientists in developing countries to participate fully in international scientific research programmes dealing with the global problems of environment and development so as to allow all countries to participate on equal footing in negotiations on global environmental and developmental issues. In the face of threats of irreversible environmental damage, lack of full scientific understanding should not be an excuse for postponing actions which are justified in their own right. The precautionary approach could provide a basis for policies relating to complex systems that are not yet fully understood and whose consequences of disturbances cannot yet be predicted.

35.4. The programme areas, which are in harmony with the conclusions and recommendations of the International Conference on an Agenda of Science for Environment and Development into the 21st Century (ASCEND 21) are:

(a) Strengthening the scientific basis for sustainable management;

(b) Enhancing scientific understanding;

(c) Improving long-term scientific assessment;

(d) Building up scientific capacity and capability.

PROGRAMME AREAS

A. Strengthening the scientific basis for sustainable management

Basis for action

35.5. Sustainable development requires taking longer-term perspectives, integrating local and regional effects of global change into the development process, and using the best scientific and traditional knowledge available. The development process should be constantly re-evaluated, in light of the findings of scientific research, to ensure that resource utilization has reduced impacts on the Earth system. Even so, the future is uncertain, and there will be surprises. Good environmental and developmental management policies must therefore be scientifically robust, seeking to keep open a range of options to ensure flexibility of response. The precautionary approach is important. Often, there is a communication gap among scientists, policy makers, and the public at large, whose interests are articulated by both governmental and non-governmental organizations. Better communication is required among scientists, decision makers, and the general public.

Objectives

35.6. The primary objective is for each country with the support of international organizations, as requested, to identify the state of its scientific knowledge and its research needs and priorities in order to achieve, as soon as possible, substantial improvements in:

(a) Large-scale widening of the scientific base and strengthening of scientific and research capacities and capabilities - in particular, those of developing countries - in areas relevant to environment and development;

(b) Environmental and developmental policy formulation, building upon the best scientific knowledge and assessments, and taking into account the need to enhance international cooperation and the relative uncertainties of the various processes and options involved;

(c) The interaction between the sciences and decision-making, using the precautionary approach, where appropriate, to change the existing patterns of production and consumption and to gain time for reducing uncertainty with respect to the selection of policy options;

(d) The generation and application of knowledge, especially indigenous and local knowledge, to the capacities of different environments and cultures, to achieve sustained levels of development, taking into account interrelations at the national, regional and international levels;

(e) Improving cooperation between scientists by promoting interdisciplinary research programmes and activities;

(f) Participation of people in setting priorities and in decision-making relating to sustainable development.

Activities

35.7. Countries, with the assistance of international organizations, where required, should:

(a) Prepare an inventory of their natural and social science data holdings relevant to the promotion of sustainable development;

(b) Identify their research needs and priorities in the context of international research efforts;

(c) Strengthen and design appropriate institutional mechanisms at the highest appropriate local, national, subregional and regional levels and within the United Nations system for developing a stronger scientific basis for the improvement of environmental and developmental policy formulation consistent with long-term goals of sustainable development. Current research in this area should be broadened to include more involvement of the public in establishing long-term societal goals for formulating the sustainable development scenarios;

(d) Develop, apply and institute the necessary tools for sustainable development, with regard to:

(i) Quality-of-life indicators covering, for example, health, education, social welfare, state of the environment, and the economy;

(ii) Economic approaches to environmentally sound development and new and improved incentive structures for better resource management;

(iii) Long-term environmental policy formulation, risk management and environmentally sound technology assessment;

(e) Collect, analyse and integrate data on the linkages between the state of ecosystems and the health of human communities in order to improve knowledge of the cost and benefit of different development policies and strategies in relation to health and the environment, particularly in developing countries;

(f) Conduct scientific studies of national and regional pathways to sustainable development, using comparable and complementary methodologies. Such studies, coordinated by an international science effort, should to a large extent involve local expertise and be conducted by multidisciplinary teams from regional networks and/or research centres, as appropriate and according to national capacities and the available resources;

(g) Improve capabilities for determining scientific research priorities at the national, regional and global levels to meet the needs of sustainable development. This is a process that involves scientific judgements regarding short-term and long-term benefits and possible long-term costs and risks. It should be adaptive and responsive to perceived needs and be carried out via transparent, "user-friendly", risk-evaluation methodologies;

(h) Develop methods to link the findings of the established sciences with the indigenous knowledge of different cultures. The methods should be tested using pilot studies. They should be developed at the local level and should concentrate on the links between the traditional knowledge of indigenous groups and corresponding, current "advanced science", with particular focus on disseminating and applying the results to environmental protection and sustainable development.

Means of implementation

(a) Financing and cost evaluation

35.8. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $150 million, including about $30 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon,

inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

35.9. The scientific and technological means include the following:

(a) Supporting new scientific research programmes, including their socio-economic and human aspects, at the community, national, subregional, regional and global levels, to complement and encourage synergies between traditional and conventional scientific knowledge and practices and strengthening interdisciplinary research related to environmental degradation and rehabilitation;

(b) Setting up demonstration models of different types (e.g., socio-economic, environmental conditions) to study methodologies and formulate guidelines;

(c) Supporting research by developing relative-risk evaluation methods to assist policy makers in ranking scientific research priorities.

B. Enhancing scientific understanding

Basis for action

35.10. In order to promote sustainable development, more extensive knowledge is required of the Earth's carrying capacity, including the processes that could either impair or enhance its ability to support life. The global environment is changing more rapidly than at any time in recent centuries; as a result, surprises may be expected, and the next century could see significant environmental changes. At the same time, the human consumption of energy, water and non-renewable resources is increasing, on both a total and a per capita basis, and shortages may ensue in many parts of the world even if environmental conditions were to remain unchanged. Social processes are subject to multiple variations across time and space, regions and culture. They both affect and are influenced by changing environmental conditions. Human factors are key driving forces in these intricate sets of relationships and exert their influence directly on global change. Therefore, study of the human dimensions of the causes and consequences of environmental change and of more sustainable development paths is essential.

Objectives

35.11. One key objective is to improve and increase the fundamental understanding of the linkages between human and natural environmental systems and improve the analytical and predictive tools required to better understand the environmental impacts of development options by:

(a) Carrying out research programmes in order better to understand the carrying capacity of the Earth as conditioned by its natural systems, such as the biogeochemical cycles, the atmosphere/hydrosphere/lithosphere/cryosphere system, the biosphere and biodiversity, the agro-ecosystem and other terrestrial and aquatic ecosystems;

(b) Developing and applying new analytical and predictive tools in order to assess more accurately the ways in which the Earth's natural systems are being increasingly influenced by human actions, both deliberate and inadvertent, and demographic trends, and the impact and consequences of those actions and trends;

(c) Integrating physical, economic and social sciences in order better to understand the impacts of economic and social behaviour on the environment and of environmental degradation on local and global economies.

Activities

35.12. The following activities should be undertaken:

(a) Support development of an expanded monitoring network to describe cycles (for example, global, biogeochemical and hydrological cycles) and test hypotheses regarding their behaviour, and improve research into the interactions among the various global cycles and their consequences at national, subregional, regional and global levels as guides to tolerance and vulnerability;

(b) Support national, subregional, regional and international observation and research programmes in global atmospheric chemistry and the sources and sinks of greenhouse gases, and ensure that the results are presented in a publicly accessible and understandable form;

(c) Support national, subregional, regional and international research programmes on marine and terrestrial systems, strengthen global terrestrial databases of their components, expand corresponding systems for monitoring their changing states and enhance predictive modelling of the Earth system and its subsystems, including modelling of the functioning of these systems assuming different intensities of human impact. The research programmes should include the programmes mentioned in other Agenda 21 chapters which support mechanisms for cooperation and coherence of research programmes on global change;

(d) Encourage coordination of satellite missions, the networks, systems and procedures for processing and disseminating their data; and develop the interface with the research users of Earth observation data and with the United Nations EARTHWATCH system;

(e) Develop the capacity for predicting the responses of terrestrial, freshwater, coastal and marine ecosystems and biodiversity to short- and long-term perturbations of the environment, and develop further restoration ecology;

(f) Study the role of biodiversity and the loss of species in the functioning of ecosystems and the global life-support system;

(g) Initiate a global observing system of parameters needed for the rational management of coastal and mountain zones and significantly expand freshwater quantity/quality monitoring systems, particularly in developing countries;

(h) In order to understand the Earth as a system, develop Earth observation systems from space which will provide integrated, continuous and long-term measurements of the interactions of the atmosphere, hydrosphere and lithosphere, and develop a distribution system for data which will facilitate the utilization of data obtained through observation;

(i) Develop and apply systems and technology that automatically collect, record and transmit data and information to data and analysis centres, in order to monitor marine, terrestrial and atmospheric processes and provide advance warning of natural disasters;

(j) Enhance the contribution of the engineering sciences to multidisciplinary research programmes on the Earth system, in particular with regard to increasing emergency preparedness and reducing the negative effects of major natural disasters;

(k) Intensify research to integrate the physical, economic and social sciences to better understand the impacts of economic and social behaviour on the environment and of environmental degradation on local and global economies and, in particular:

(i) Develop research on human attitudes and behaviour as driving forces central to an understanding of the causes and consequences of environmental change and resource use;

(ii) Promote research on human, economic and social responses to global change;

(l) Support development of new user-friendly technologies and systems that facilitate the integration of multidisciplinary, physical, chemical, biological and social/human processes which, in turn, provide information and knowledge for decision makers and the general public.

Means of implementation

(a) Financing and cost evaluation

35.13. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $2 billion, including about $1.5 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and

financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

35.14. The scientific and technological means include the following:

(a) Supporting and using the relevant national research activities of academia, research institutes and governmental and non-governmental organizations, and promoting their active participation in regional and global programmes, particularly in developing countries;

(b) Increasing the use of appropriate enabling systems and technologies, such as supercomputers, space-based observational technology, Earth- and ocean-based observational technologies, data management and database technologies and, in particular, developing and expanding the Global Climate Observing System.

C. Improving long-term scientific assessment

Basis for action

35.15. Meeting scientific research needs in the environment/development field is only the first step in the support that the sciences can provide for the sustainable development process. The knowledge acquired may then be used to provide scientific assessments (audits) of the current status and for a range of possible future conditions. This implies that the biosphere must be maintained in a healthy state and that losses in biodiversity must be slowed down. Although many of the long-term environmental changes that are likely to affect people and the biosphere are global in scale, key changes can often be made at the national and local levels. At the same time, human activities at the local and regional levels often contribute to global threats - e.g., stratospheric ozone depletion. Thus scientific assessments and projections are required at the global, regional and local levels. Many countries and organizations already prepare reports on the environment and development which review current conditions and indicate future trends. Regional and global assessments could make full use of such reports but should be broader in scope and include the results of detailed studies of future conditions for a range of assumptions about possible future human responses, using the best available models. Such assessments should be designed to map out manageable development pathways within the environmental and socio-economic carrying capacity of each region. Full use should be made of traditional knowledge of the local environment.

Objectives

35.16. The primary objective is to provide assessments of the current status and trends in major developmental and environmental issues at the national,

subregional, regional and global levels on the basis of the best available scientific knowledge in order to develop alternative strategies, including indigenous approaches, for the different scales of time and space required for long-term policy formulation.

Activities

35.17. The following activities should be undertaken:

(a) Coordinate existing data- and statistics-gathering systems relevant to developmental and environmental issues so as to support preparation of long-term scientific assessments - for example, data on resource depletion, import/export flows, energy use, health impacts and demographic trends; apply the data obtained through the activities identified in programme area B to environment/development assessments at the global, regional and local levels; and promote the wide distribution of the assessments in a form that is responsive to public needs and can be widely understood;

(b) Develop a methodology to carry out national and regional audits and a five-year global audit on an integrated basis. The standardized audits should help to refine the pattern and character of development, examining in particular the capacities of global and regional life-supporting systems to meet the needs of human and non-human life forms and identifying areas and resources vulnerable to further degradation. This task would involve the integration of all relevant sciences at the national, regional, and global levels, and would be organized by governmental agencies, non-governmental organizations, universities and research institutions, assisted by international governmental and non-governmental organizations and United Nations bodies, when necessary and as appropriate. These audits should then be made available to the general public.

Means of implementation

Financing and cost evaluation

35.18. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $35 million, including about $18 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

35.19. With regard to the existing data requirements under programme area A, support should be provided for national data collection and warning systems. This would involve setting up database, information and reporting systems, including data assessment and information dissemination in each region.

D. Building up scientific capacity and capability

Basis for action

35.20. In view of the increasing role the sciences have to play in dealing with the issues of environment and development, it is necessary to build up scientific capacity and strengthen such capacity in all countries - particularly in developing countries - to enable them to participate fully in the generation and application of the results of scientific research and development concerning sustainable development. There are many ways to build up scientific and technological capacity. Some of the most important of them are the following: education and training in science and technology; assistance to developing countries to improve infrastructures for research and development which could enable scientists to work more productively; development of incentives to encourage research and development; and greater utilization of their results in the productive sectors of the economy. Such capacity-building would also form the basis for improving public awareness and understanding of the sciences. Special emphasis must be put on the need to assist developing countries to strengthen their capacities to study their own resource bases and ecological systems and manage them better in order to meet national, regional and global challenges. Furthermore, in view of the size and complexity of global environmental problems, a need for more specialists in several disciplines has become evident world wide.

Objectives

35.21. The primary objective is to improve the scientific capacities of all countries - in particular, those of developing countries - with specific regard to:

(a) Education, training and facilities for local research and development and human resource development in basic scientific disciplines and in environment-related sciences, utilizing where appropriate traditional and local knowledge of sustainability;

(b) A substantial increase by the year 2000 in the number of scientists - particularly women scientists - in those developing countries where their number is at present insufficient;

(c) Reducing significantly the exodus of scientists from developing countries and encouraging those who have left to return;

(d) Improving access to relevant information for scientists and decision makers, with the aim of improving public awareness and participation in decision-making;

(e) Involvement of scientists in national, regional and global environmental and developmental research programmes, including multidisciplinary research;

(f) Periodic academic update of scientists from developing countries in their respective fields of knowledge.

Activities

35.22. The following activities should be undertaken:

(a) Promote the education and training of scientists, not only in their disciplines but also in their ability to identify, manage and incorporate environmental considerations into research and development projects; ensure that a sound base in natural systems, ecology and resource management is provided; and develop specialists capable of working in interdisciplinary programmes related to environment and development, including the field of applied social sciences;

(b) Strengthen the scientific infrastructure in schools, universities and research institutions - particularly those in developing countries - by the provision of adequate scientific equipment and access to current scientific literature, for the purpose of achieving and sustaining a critical mass of highly qualified scientists in these countries;

(c) Develop and expand national scientific and technological databases, processing data in unified formats and systems, and allowing full and open access to the depository libraries of regional scientific and technological information networks. Promote submission of scientific and technological information and databases to global or regional data centres and network systems;

(d) Develop and expand regional and global scientific and technological information networks which are based on and linked to national scientific and technological databases; collect, process and disseminate information from regional and global scientific programmes; expand activities to reduce information barriers due to language differences. Increase the applications - particularly in developing countries - of computer-based retrieval systems in order to cope with the growth of scientific literature;

(e) Develop, strengthen and forge new partnerships among national, regional and global capacities to promote the full and open exchange of scientific and technological data and information and to facilitate technical assistance related to environmentally sound and sustainable development. This should be done through the development of mechanisms for the sharing of basic research, data and information, and the improvement and development of international networks and centres, including regional linking with national scientific databases, for research, training and monitoring. Such mechanisms should be designed so as to enhance professional cooperation among scientists in all countries and to establish strong national and regional alliances between industry and research institutions;

(f) Improve and develop new links between existing networks of natural and social scientists and universities at the international level in order to

strengthen national capacities in the formulation of policy options in the field of environment and development;

(g) Compile, analyse and publish information on indigenous environmental and developmental knowledge, and assist the communities that possess such knowledge to benefit from them.

Means of implementation

(a) Financing and cost evaluation

35.23. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $750 million, including about $470 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

35.24. Such means include increasing and strengthening regional multidisciplinary research and training networks and centres making optimal use of existing facilities and associated sustainable development and technology support systems in developing regions. Promote and use the potential of independent initiatives and indigenous innovations and entrepreneurship. The function of such networks and centres could include, for example:

(a) Support and coordination of scientific cooperation among all nations in the region;

(b) Linking with monitoring centres and carrying out assessment of environmental and developmental conditions;

(c) Support and coordination of national studies of pathways towards sustainable development;

(d) Organization of science education and training;

(e) Establishment and maintenance of information, monitoring and assessment systems and databases.

(c) Capacity-building

35.25. Capacity-building includes the following:

(a) Creating conditions (e.g., salaries, equipment, libraries) to ensure that the scientists will work effectively in their home countries;

(b) Enhancing national, regional and global capacities for carrying out scientific research and applying scientific and technological information to environmentally sound and sustainable development. This includes a need to increase financial resources for global and regional scientific and technological information networks, as may be appropriate, so that they will be able to function effectively and efficiently in satisfying the scientific needs of developing countries. Ensure the capacity-building of women by recruiting more women in research and research training.

Chapter 36

PROMOTING EDUCATION, PUBLIC AWARENESS AND TRAINING

INTRODUCTION

36.1. Education, raising of public awareness and training are linked to virtually all areas in Agenda 21, and even more closely to the ones on meeting basic needs, capacity-building, data and information, science, and the role of major groups. This chapter sets out broad proposals, while specific suggestions related to sectoral issues are contained in other chapters. The Declaration and Recommendations of the Tbilisi Intergovernmental Conference on Environmental Education 1/ organized by UNESCO and UNEP and held in 1977, have provided the fundamental principles for the proposals in this document.

36.2. Programme areas described in the present chapter are:

(a) Reorienting education towards sustainable development;

(b) Increasing public awareness;

(c) Promoting training.

PROGRAMME AREAS

A. Reorienting education towards sustainable development

Basis for action

36.3. Education, including formal education, public awareness and training should be recognized as a process by which human beings and societies can reach their fullest potential. Education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues. While basic education provides the underpinning for any environmental and development education, the latter needs to be incorporated as an essential part of learning. Both formal and non-formal education are indispensable to changing people's attitudes so that they have the capacity to assess and address their sustainable development concerns. It is also critical for achieving environmental and ethical awareness, values and attitudes, skills and behaviour consistent with sustainable development and for effective public participation in decision-making. To be effective, environment and development education should deal with the dynamics of both the physical/biological and socio-economic environment and human (which may include spiritual) development, should be integrated in all disciplines, and should employ formal and non-formal methods and effective means of communication.

Objectives

36.4. Recognizing that countries, regional and international organizations will develop their own priorities and schedules for implementation in accordance with their needs, policies and programmes, the following objectives are proposed:

(a) To endorse the recommendations arising from the World Conference on Education for All: Meeting Basic Learning Needs 2/ (Jomtien, Thailand, 5-9 March 1990) and to strive to ensure universal access to basic education, and to achieve primary education for at least 80 per cent of girls and 80 per cent of boys of primary school age through formal schooling or non-formal education and to reduce the adult illiteracy rate to at least half of its 1990 level. Efforts should focus on reducing the high illiteracy levels and redressing the lack of basic education among women and should bring their literacy levels into line with those of men;

(b) To achieve environmental and development awareness in all sectors of society on a world-wide scale as soon as possible;

(c) To strive to achieve the accessibility of environmental and development education, linked to social education, from primary school age through adulthood to all groups of people;

(d) To promote integration of environment and development concepts, including demography, in all educational programmes, in particular the analysis of the causes of major environment and development issues in a local context, drawing on the best available scientific evidence and other appropriate sources of knowledge, and giving special emphasis to the further training of decision makers at all levels.

Activities

36.5. Recognizing that countries and regional and international organizations will develop their own priorities and schedules for implementation in accordance with their needs, policies and programmes, the following activities are proposed:

(a) All countries are encouraged to endorse the recommendations of the Jomtien Conference and strive to ensure its Framework for Action. This would encompass the preparation of national strategies and actions for meeting basic learning needs, universalizing access and promoting equity, broadening the means and scope of education, developing a supporting policy context, mobilizing resources and strengthening international cooperation to redress existing economic, social and gender disparities which interfere with these aims. Non-governmental organizations can make an important contribution in designing and implementing educational programmes and should be recognized;

(b) Governments should strive to update or prepare strategies aimed at integrating environment and development as a cross-cutting issue into education at all levels within the next three years. This should be done in cooperation with all sectors of society. The strategies should set out policies and activities, and identify needs, cost, means and schedules for their implementation, evaluation and review. A thorough review of curricula should be undertaken to ensure a multidisciplinary approach, with environment and development issues and their socio-cultural and demographic aspects and linkages. Due respect should be given to community-defined needs and diverse knowledge systems, including science, cultural and social sensitivities;

(c) Countries are encouraged to set up national advisory environmental education coordinating bodies or round tables representative of various environmental, developmental, educational, gender and other interests, including non-governmental organizations, to encourage partnerships, help mobilize resources, and provide a source of information and focal point for international ties. These bodies would help mobilize and facilitate different population groups and communities to assess their own needs and to develop the necessary skills to create and implement their own environment and development initiatives;

(d) Educational authorities, with the appropriate assistance from community groups or non-governmental organizations, are recommended to assist or set up pre-service and in-service training programmes for all teachers, administrators, and educational planners, as well as non-formal educators in all sectors, addressing the nature and methods of environmental and development education and making use of relevant experience of non-governmental organizations;

(e) Relevant authorities should ensure that every school is assisted in designing environmental activity work plans, with the participation of students and staff. Schools should involve schoolchildren in local and regional studies on environmental health, including safe drinking water, sanitation and food and ecosystems and in relevant activities, linking these studies with services and research in national parks, wildlife reserves, ecological heritage sites etc.;

(f) Educational authorities should promote proven educational methods and the development of innovative teaching methods for educational settings. They should also recognize appropriate traditional education systems in local communities;

(g) Within two years the United Nations system should undertake a comprehensive review of its educational programmes, encompassing training and public awareness, to reassess priorities and reallocate resources. The UNESCO/UNEP International Environmental Education Programme should, in cooperation with the appropriate bodies of the United Nations system, Governments, non-governmental organizations and others, establish a programme within two years to integrate the decisions of the Conference into the existing United Nations framework adapted to the needs of educators at

different levels and circumstances. Regional organizations and national authorities should be encouraged to elaborate similar parallel programmes and opportunities by conducting an analysis of how to mobilize different sectors of the population in order to assess and address their environmental and development education needs;

(h) There is a need to strengthen, within five years, information exchange by enhancing technologies and capacities necessary to promote environment and development education and public awareness. Countries should cooperate with each other and with the various social sectors and population groups to prepare educational tools that include regional environment and development issues and initiatives, using learning materials and resources suited to their own requirements;

(i) Countries could support university and other tertiary activities and networks for environmental and development education. Cross-disciplinary courses could be made available to all students. Existing regional networks and activities and national university actions which promote research and common teaching approaches on sustainable development should be built upon, and new partnerships and bridges created with the business and other independent sectors, as well as with all countries for technology, know-how, and knowledge exchange;

(j) Countries, assisted by international organizations, non-governmental organizations and other sectors, could strengthen or establish national or regional centres of excellence in interdisciplinary research and education in environmental and developmental sciences, law and the management of specific environmental problems. Such centres could be universities or existing networks in each country or region, promoting cooperative research and information sharing and dissemination. At the global level these functions should be performed by appropriate institutions;

(k) Countries should facilitate and promote non-formal education activities at the local, regional and national levels by cooperating with and supporting the efforts of non-formal educators and other community-based organizations. The appropriate bodies of the United Nations system in cooperation with non-governmental organizations should encourage the development of an international network for the achievement of global educational aims. At the national and local levels, public and scholastic forums should discuss environmental and development issues, and suggest sustainable alternatives to policy makers;

(l) Educational authorities, with appropriate assistance of non-governmental organizations, including women's and indigenous peoples' organizations, should promote all kinds of adult education programmes for continuing education in environment and development, basing activities around elementary/secondary schools and local problems. These authorities and industry should encourage business, industrial and agricultural schools to include such topics in their curricula. The corporate sector could include sustainable development in their education and training programmes.

Programmes at a post-graduate level should include specific courses aiming at the further training of decision makers;

(m) Governments and educational authorities should foster opportunities for women in non-traditional fields and eliminate gender stereotyping in curricula. This could be done by improving enrolment opportunities, including females in advanced programmes as students and instructors, reforming entrance and teacher staffing policies and providing incentives for establishing child-care facilities, as appropriate. Priority should be given to education of young females and to programmes promoting literacy among women;

(n) Governments should affirm the rights of indigenous peoples, by legislation if necessary, to use their experience and understanding of sustainable development to play a part in education and training;

(o) The United Nations could maintain a monitoring and evaluative role regarding decisions of the United Nations Conference on Environment and Development on education and awareness, through the relevant United Nations agencies. With Governments and non-governmental organizations, as appropriate, it should present and disseminate decisions in a variety of forms, and should ensure the continuous implementation and review of the educational implications of Conference decisions, in particular through relevant events and conferences.

Means of implementation

Financing and cost evaluation

36.6. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $8 billion to $9 billion, including about $3.5 billion to $4.5 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

36.7. In the light of country-specific situations, more support for education, training and public awareness activities related to environment and development could be provided, in appropriate cases, through measures such as the following:

(a) Giving higher priority to those sectors in budget allocations, protecting them from structural cutting requirements;

(b) Shifting allocations within existing education budgets in favour of primary education, with focus on environment and development;

(c) Promoting conditions where a larger share of the cost is borne by local communities, with rich communities assisting poorer ones;

(d) Obtaining additional funds from private donors concentrating on the poorest countries, and those with rates of literacy below 40 per cent;

(e) Encouraging debt for education swaps;

(f) Lifting restrictions on private schooling and increasing the flow of funds from and to non-governmental organizations, including small-scale grass-roots organizations;

(g) Promoting the effective use of existing facilities, for example, multiple school shifts, fuller development of open universities and other long-distance teaching;

(h) Facilitating low-cost or no-cost use of mass media for the purposes of education;

(i) Encouraging twinning of universities in developed and developing countries.

B. Increasing public awareness

Basis for action

36.8. There is still a considerable lack of awareness of the interrelated nature of all human activities and the environment, due to inaccurate or insufficient information. Developing countries in particular lack relevant technologies and expertise. There is a need to increase public sensitivity to environment and development problems and involvement in their solutions and foster a sense of personal environmental responsibility and greater motivation and commitment towards sustainable development.

Objective

36.9. The objective is to promote broad public awareness as an essential part of a global education effort to strengthen attitudes, values and actions which are compatible with sustainable development. It is important to stress the principle of devolving authority, accountability and resources to the most appropriate level with preference given to local responsibility and control over awareness-building activities.

Activities

36.10. Recognizing that countries, regional and international organizations will develop their own priorities and schedules for implementation in accordance with their needs, policies and programmes, the following activities are proposed:

(a) Countries should strengthen existing advisory bodies or establish new ones for public environment and development information, and should

coordinate activities with, among others, the United Nations, non-governmental organizations and important media. They should encourage public participation in discussions of environmental policies and assessments. Governments should also facilitate and support national to local networking of information through existing networks;

(b) The United Nations system should improve its outreach in the course of a review of its education and public awareness activities to promote greater involvement and coordination of all parts of the system, especially its information bodies and regional and country operations. Systematic surveys of the impact of awareness programmes should be conducted, recognizing the needs and contributions of specific community groups;

(c) Countries and regional organizations should be encouraged, as appropriate, to provide public environmental and development information services for raising the awareness of all groups, the private sector and particularly decision makers;

(d) Countries should stimulate educational establishments in all sectors, especially the tertiary sector, to contribute more to awareness building. Educational materials of all kinds and for all audiences should be based on the best available scientific information, including the natural, behavioural and social sciences, and taking into account aesthetic and ethical dimensions;

(e) Countries and the United Nations system should promote a cooperative relationship with the media, popular theatre groups, and entertainment and advertising industries by initiating discussions to mobilize their experience in shaping public behaviour and consumption patterns and making wide use of their methods. Such cooperation would also increase the active public participation in the debate on the environment. UNICEF should make child-oriented material available to media as an educational tool, ensuring close cooperation between the out-of-school public information sector and the school curriculum, for the primary level. UNESCO, UNEP and universities should enrich pre-service curricula for journalists on environment and development topics;

(f) Countries, in cooperation with the scientific community, should establish ways of employing modern communication technologies for effective public outreach. National and local educational authorities and relevant United Nations agencies should expand, as appropriate, the use of audio-visual methods, especially in rural areas in mobile units, by producing television and radio programmes for developing countries, involving local participation, employing interactive multimedia methods and integrating advanced methods with folk media;

(g) Countries should promote, as appropriate, environmentally sound leisure and tourism activities, building on The Hague Declaration of Tourism (1989) and the current programmes of the World Tourism Organization and UNEP, making suitable use of museums, heritage sites, zoos, botanical gardens, national parks, and other protected areas;

(h) Countries should encourage non-governmental organizations to increase their involvement in environmental and development problems, through joint awareness initiatives and improved interchange with other constituencies in society;

(i) Countries and the United Nations system should increase their interaction with and include, as appropriate, indigenous people in the management, planning and development of their local environment, and should promote dissemination of traditional and socially learned knowledge through means based on local customs, especially in rural areas, integrating these efforts with the electronic media, whenever appropriate;

(j) UNICEF, UNESCO, UNDP and non-governmental organizations should develop support programmes to involve young people and children in environment and development issues, such as children's and youth hearings and building on decisions of the World Summit for Children (A/45/625, annex);

(k) Countries, the United Nations and non-governmental organizations should encourage mobilization of both men and women in awareness campaigns, stressing the role of the family in environmental activities, women's contribution to transmission of knowledge and social values and the development of human resources;

(l) Public awareness should be heightened regarding the impacts of violence in society.

Means of implementation

Financing and cost evaluation

36.11. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $1.2 billion, including about $110 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

C. Promoting training

Basis for action

36.12. Training is one of the most important tools to develop human resources and facilitate the transition to a more sustainable world. It should have a job-specific focus, aimed at filling gaps in knowledge and skill that would help individuals find employment and be involved in environmental and development work. At the same time, training programmes should promote a greater awareness of environment and development issues as a two-way learning process.

Objectives

36.13. The following objectives are proposed:

(a) To establish or strengthen vocational training programmes that meet the needs of environment and development with ensured access to training opportunities, regardless of social status, age, gender, race or religion;

(b) To promote a flexible and adaptable workforce of various ages equipped to meet growing environment and development problems and changes arising from the transition to a sustainable society;

(c) To strengthen national capacities, particularly in scientific education and training, to enable Governments, employers and workers to meet their environmental and development objectives and to facilitate the transfer and assimilation of new environmentally sound, socially acceptable and appropriate technology and know-how;

(d) To ensure that environmental and human ecological considerations are integrated at all managerial levels and in all functional management areas, such as marketing, production and finance.

Activities

36.14. Countries with the support of the United Nations system should identify workforce training needs and assess measures to be taken to meet those needs. A review of progress in this area could be undertaken by the United Nations system in 1995.

36.15. National professional associations are encouraged to develop and review their codes of ethics and conduct to strengthen environmental connections and commitment. The training and personal development components of programmes sponsored by professional bodies should ensure incorporation of skills and information on the implementation of sustainable development at all points of policy- and decision-making.

36.16. Countries and educational institutions should integrate environmental and developmental issues into existing training curricula and promote the exchange of their methodologies and evaluations.

36.17. Countries should encourage all sectors of society, such as industry, universities, government officials and employees, non-governmental organizations and community organizations, to include an environmental management component in all relevant training activities, with emphasis on meeting immediate skill requirements through short-term formal and in-plant vocational and management training. Environmental management training capacities should be strengthened, and specialized "training of trainers" programmes should be established to support training at the national and enterprise levels. New training approaches for existing environmentally sound practices should be developed that create employment opportunities and make maximum use of local resource-based methods.

36.18. Countries should strengthen or establish practical training programmes for graduates from vocational schools, high schools and universities, in all countries, to enable them to meet labour market requirements and to achieve sustainable livelihoods. Training and retraining programmes should be established to meet structural adjustments which have an impact on employment and skill qualifications.

36.19. Governments are encouraged to consult with people in isolated situations, whether geographically, culturally or socially, to ascertain their needs for training to enable them to contribute more fully to developing sustainable work practices and lifestyles.

36.20. Governments, industry, trade unions, and consumers should promote an understanding of the interrelationship between good environment and good business practices.

36.21. Countries should develop a service of locally trained and recruited environmental technicians able to provide local people and communities, particularly in deprived urban and rural areas, with the services they require, starting from primary environmental care.

36.22. Countries should enhance the ability to gain access to, analyse and effectively use information and knowledge available on environment and development. Existing or established special training programmes should be strengthened to support information needs of special groups. The impact of these programmes on productivity, health, safety and employment should be evaluated. National and regional environmental labour-market information systems should be developed that would supply, on a continuing basis, data on environmental job and training opportunities. Environment and development training resource-guides should be prepared and updated, with information on training programmes, curricula, methodologies and evaluation results at the local, national, regional and international levels.

36.23. Aid agencies should strengthen the training component in all development projects, emphasizing a multidisciplinary approach, promoting awareness and providing the necessary skills for transition to a sustainable society. The environmental management guidelines of UNDP for operational activities of the United Nations system may contribute to this end.

36.24. Existing networks of employers' and workers' organizations, industry associations and non-governmental organizations should facilitate the exchange of experience concerning training and awareness programmes.

36.25. Governments, in cooperation with relevant international organizations, should develop and implement strategies to deal with national, regional and local environmental threats and emergencies, emphasizing urgent practical training and awareness programmes for increasing public preparedness.

36.26. The United Nations system, as appropriate, should extend its training programmes, particularly its environmental training and support activities for employers' and workers' organizations.

Means of implementation

Financing and cost evaluation

36.27. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $5 billion, including about $2 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

Notes

1/ Intergovernmental Conference on Environmental Education: Final Report (Paris, UNESCO, 1978), chap. III.

2/ Final Report of the World Conference on Education for All: Meeting Basic Learning Needs, Jomtien, Thailand, 5-9 March 1990 (New York, Inter-Agency Commission (UNDP, UNESCO, UNICEF, World Bank) for the World Conference on Education for All, 1990).

Chapter 37

NATIONAL MECHANISMS AND INTERNATIONAL COOPERATION FOR CAPACITY-BUILDING IN DEVELOPING COUNTRIES

PROGRAMME AREA

Basis for action

37.1. The ability of a country to follow sustainable development paths is determined to a large extent by the capacity of its people and its institutions as well as by its ecological and geographical conditions. Specifically, capacity-building encompasses the country's human, scientific, technological, organizational, institutional and resource capabilities. A fundamental goal of capacity-building is to enhance the ability to evaluate and address the crucial questions related to policy choices and modes of implementation among development options, based on an understanding of environmental potentials and limits and of needs as perceived by the people of the country concerned. As a result, the need to strengthen national capacities is shared by all countries.

37.2. Building endogenous capacity to implement Agenda 21 will require the efforts of the countries themselves in partnership with relevant United Nations organizations, as well as with developed countries. The international community at the national, subregional and regional levels, municipalities, non-governmental organizations, universities and research centres, and business and other private institutions and organizations could also assist in these efforts. It is essential for individual countries to identify priorities and determine the means for building the capacity and capability to implement Agenda 21, taking into account their environmental and economic needs. Skills, knowledge and technical know-how at the individual and institutional levels are necessary for institution-building, policy analysis and development management, including the assessment of alternative courses of action with a view to enhancing access to and tranfer of technology and promoting economic development. Technical cooperation, including that related to technology transfer and know-how, encompasses the whole range of activities to develop or strengthen individual and group capacities and capabilities. It should serve the purpose of long-term capacity-building and needs to be managed and coordinated by the countries themselves. Technical cooperation, including that related to technology transfer and know-how, is effective only when it is derived from and related to a country's own strategies and priorities on environment and development and when development agencies and Governments define improved and consistent policies and procedures to support this process.

Objectives

37.3. The overall objectives of endogenous capacity-building in this programme area are to develop and improve national and related subregional and

regional capacities and capabilities for sustainable development, with the involvement of the non-governmental sectors. The programme should assist by:

(a) Promoting an ongoing participatory process to define country needs and priorities in promoting Agenda 21 and to give importance to technical and professional human resource development and development of institutional capacities and capabilities on the agenda of countries, with due recognition of the potential for optimum use of existing human resources as well as enhancement of the efficiency of existing institutions and non-governmental organizations, including scientific and technological institutions;

(b) Reorienting technical cooperation and, in that process, setting new priorities in the field, including that related to transfer of technology and know-how processes, while giving due attention to the specific conditions and individual needs of recipients, and improving coordination among providers of assistance for support to countries' own programmes of action. This coordination should also include non-governmental organizations and scientific and technological institutions, as well as business and industry whenever appropriate;

(c) Shifting time horizons in programme planning and implementation for the development and strengthening of institutional structures to permit an enhancement of their ability to respond to new longer-term challenges rather than concentrating only on immediate problems;

(d) Improving and reorienting existing international multilateral institutions with responsibilities for environment and/or development matters to ensure that those institutions have the capability and capacity to integrate environment and development;

(e) Improving institutional capacity and capability, both public and private, in order to evaluate the environmental impact of all development projects.

37.4. Specific objectives include the following:

(a) Each country should aim to complete, as soon as practicable, if possible by 1994, a review of capacity- and capability-building requirements for devising national sustainable development strategies, including those for generating and implementing its own Agenda 21 action programme;

(b) By 1997, the Secretary-General should submit to the General Assembly a report on the achievement of improved policies, coordination systems and procedures for strengthening the implementation of technical cooperation programmes for sustainable development, as well as on additional measures required to strengthen such cooperation. That report should be prepared on the basis of information provided by countries, international organizations, environment and development institutions, donor agencies and non-governmental partners.

Activities

(a) Building a national consensus and formulating capacity-building strategies for implementing Agenda 21

37.5. As an important aspect of overall planning, each country should seek internal consensus at all levels of society on policies and programmes needed for short- and long-term capacity-building to implement its Agenda 21 programme. This consensus should result from a participatory dialogue of relevant interest groups and lead to an identification of skill gaps, institutional capacities and capabilities, technological and scientific requirements and resource needs to enhance environmental knowledge and administration to integrate environment and development. UNDP in partnership with relevant specialized agencies and other international intergovernmental and non-governmental organizations could assist, upon request of Governments, in the identification of the requirements for technical cooperation, including those related to technology transfer and know-how and development assistance for the implementation of Agenda 21. The national planning process together, where appropriate, with national sustainable development action plans or strategies should provide the framework for such cooperation and assistance. UNDP should use and further improve its network of field offices and its broad mandate to provide assistance, using its experience in the field of technical cooperation for facilitating capacity-building at the country and regional levels and making full use of the expertise of other bodies, in particular UNEP, the World Bank and regional commissions and development banks, as well as relevant international intergovernmental and non-governmental organizations.

(b) Identification of national sources and presentation of requests for technical cooperation, including that related to technology transfer and know-how in the framework of sector strategies

37.6. Countries desiring arrangements for technical cooperation, including that related to transfer of technology and know-how, with international organizations and donor institutions should formulate requests in the framework of long-term sector or subsector capacity-building strategies. Strategies should, as appropriate, address policy adjustments to be implemented, budgetary issues, cooperation and coordination among institutions, human resource requirements, and technology and scientific equipment requirements. They should cover public and private sector needs and consider strengthening scientific training and educational and research programmes, including such training in the developed countries and the strengthening of centres of excellence in developing countries. Countries could designate and strengthen a central unit to organize and coordinate technical cooperation, linking it with the priority-setting and the resource allocation process.

(c) Establishment of a review mechanism of technical cooperation in and related to technology transfer and know-how

37.7. Donors and recipients, the organizations and institutions of the United Nations system, and international public and private organizations should review the development of the cooperation process as it relates to technical cooperation, including that related to activities for the transfer of technology and know-how linked to sustainable development. To facilitate this process the Secretary-General could undertake, taking into account work carried out by UNDP and other organizations in preparation for the United Nations Conference on Environment and Development, consultations with developing countries, regional organizations, organizations and institutions of the United Nations system, including regional commissions, and multilateral and bilateral aid and environment agencies, with a view to further strengthening the endogenous capacities of countries and improving technical cooperation, including that related to the technology transfer and know-how process. The following aspects should be reviewed:

(a) Evaluation of existing capacity and capability for the integrated management of environment and development, including technical, technological and institutional capacities and capabilities, and facilities to assess the environmental impact of development projects; and evaluation of abilities to respond to and link up with needs for technical cooperation, including that related to technology transfer and know-how, of Agenda 21 and the global conventions on climate change and biological diversity;

(b) Assessment of the contribution of existing activities in technical cooperation, including that related to transfer of technology and know-how, towards strengthening and building national capacity and capability for integrated environment and development management and an assessment of the means of improving the quality of international technical cooperation, including that related to transfer of technolgy and know-how;

(c) A strategy for shifting to a capacity- and capability-building thrust that recognizes the need for the operational integration of environment and development with longer-term commitments, having as a basis the set of national programmes established by each country, through a participatory process;

(d) Consideration of greater use of long-term cooperative arrangements between municipalities, non-governmental organizations, universities, training and research centres and business, public and private institutions with counterparts in other countries or within countries or regions. Programmes such as the Sustainable Development Networks of UNDP should be assessed in this regard;

(e) Strengthening of the sustainability of projects by including in the original project design consideration of environmental impacts, the costs of institution-building, human resource development and technology needs, as well as financial and organizational requirements for operation and maintenance;

(f) Improvement of technical cooperation, including that related to transfer of technology and know-how and management processes, by giving greater attention to capacity- and capability-building as an integral part of sustainable development strategies for environment and development programmes both in country-related coordination processes, such as consultative groups and round tables, and in sectoral coordination mechanisms to enable developing countries to participate actively in obtaining assistance from different sources.

(d) Enhancement of the expertise and collective contribution of the United Nations system for capacity- and capability-building initiatives

37.8. Organizations, organs, bodies and institutions of the United Nations system, together with other international and regional organizations and the public and private sectors, could, as appropriate, strengthen their joint activities in technical cooperation, including that related to transfer of technology and know-how, in order to address linked environment and development issues and to promote coherence and consistency of action. Organizations could assist and reinforce countries, particularly least developed countries, upon request, on matters relating to national environmental and developmental policies, human resource development and fielding of experts, legislation, natural resources and environmental data.

37.9. UNDP, the World Bank and regional multilateral development banks, as part of their participation in national and regional coordination mechanisms, should assist in facilitating capacity- and capability-building at the country level, drawing upon the special expertise and operational capacity of UNEP in the environmental field as well as of the specialized agencies, organizations of the United Nations system and regional and subregional organizations in their respective areas of competence. For this purpose UNDP should mobilize funding for capacity- and capability-building, utilizing its network of field offices and its broad mandate and experience in the field of technical cooperation, including that related to transfer of technology and know-how. UNDP, together with these international organizations, should at the same time continue to develop consultative processes to enhance the mobilization and coordination of funds from the international community for capacity- and capability-building, including the establishment of an appropriate database. These responsibilities may need to be accompanied by strengthening of the capacities of UNDP.

37.10. The national entity in charge of technical cooperation, with the assistance of the UNDP resident representatives and the UNEP representatives, should establish a small group of key actors to steer the process, giving priority to the country's own strategies and priorities. The experience gained through existing planning exercises such as the national reports for the United Nations Conference on Environment and Development, national conservation strategies and environment action plans should be fully used and incorporated into a country-driven, participatory and sustainable development strategy. This should be complemented with information networks and consultations with donor organizations in order to improve coordination, as

well as access to the existing body of scientific and technical knowledge and information available in institutions elsewhere.

(e) Harmonization of the delivery of assistance at the regional level

37.11. At the regional level, existing organizations should consider the desirability of improved regional and subregional consultative processes and round-table meetings to facilitate the exchange of data, information and experience in the implementation of Agenda 21. UNDP, building on the results of the regional surveys on capacity-building that those regional organizations carried out on the United Nations Conference on Environment and Development initiative, and in collaboration with existing regional, subregional or national organizations with potential for regional coordination, should provide a significant input for this purpose. The relevant national unit should establish a steering mechanism. A periodic review mechanism should be established among the countries of the region with the assistance of the appropriate relevant regional organizations and the participation of development banks, bilateral aid agencies and non-governmental organizations. Other possibilities are to develop national and regional research and training facilities building on existing regional and subregional institutions.

Means of implementation

Financing and cost evaluation

37.12. The cost of bilateral expenditures to developing countries for technical cooperation, including that related to transfer of technology and know-how, is about $15 billion or about 25 per cent of total official development assistance. The implementation of Agenda 21 will require a more effective use of these funds and additional funding in key areas.

37.13. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this chapter to be between $300 million and $1 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

Chapter 38

INTERNATIONAL INSTITUTIONAL ARRANGEMENTS

BASIS FOR ACTION

38.1. The mandate of the United Nations Conference on Environment and Development emanates from General Assembly resolution 44/228, in which the Assembly, inter alia, affirmed that the Conference should elaborate strategies and measures to halt and reverse the effects of environmental degradation in the context of increased national and international efforts to promote sustainable and environmentally sound development in all countries and that the promotion of economic growth in developing countries is essential to address problems of environmental degradation. The intergovernmental follow-up to the Conference process shall be within the framework of the United Nations system, with the General Assembly being the supreme policy-making forum that would provide overall guidance to Governments, the United Nations system and relevant treaty bodies. At the same time, Governments, as well as regional economic and technical cooperation organizations, have a responsibility to play an important role in the follow-up to the Conference. Their commitments and actions should be adequately supported by the United Nations system and multilateral financial institutions. Thus, national and international efforts would mutually benefit from one another.

38.2. In fulfilling the mandate of the Conference, there is a need for institutional arrangements within the United Nations system in conformity with, and providing input into, the restructuring and revitalization of the United Nations in the economic, social and related fields, and the overall reform of the United Nations, including ongoing changes in the Secretariat. In the spirit of reform and revitalization of the United Nations system, implementation of Agenda 21 and other conclusions of the Conference shall be based on an action- and result-oriented approach and consistent with the principles of universality, democracy, transparency, cost-effectiveness and accountability.

38.3. The United Nations system, with its multisectoral capacity and the extensive experience of a number of specialized agencies in various spheres of international cooperation in the field of environment and development, is uniquely positioned to assist Governments to establish more effective patterns of economic and social development with a view to achieving the objectives of Agenda 21 and sustainable development.

38.4. All agencies of the United Nations system have a key role to play in the implementation of Agenda 21 within their respective competence. To ensure proper coordination and avoid duplication in the implementation of Agenda 21, there should be an effective division of labour between various parts of the United Nations system based on their terms of reference and comparative advantages. Member States, through relevant governing bodies, are in a

position to ensure that these tasks are carried out properly. In order to facilitate evaluation of agencies' performance and promote knowledge of their activities, all bodies of the United Nations system should be required to elaborate and publish reports of their activities concerning the implementation of Agenda 21 on a regular basis. Serious and continuous reviews of their policies, programmes, budgets and activities will also be required.

38.5. The continued active and effective participation of non-governmental organizations, the scientific community and the private sector, as well as local groups and communities, are important in the implementation of Agenda 21.

38.6. The institutional structure envisaged below will be based on agreement on financial resources and mechanisms, technology transfer, the Rio Declaration and Agenda 21. In addition, there has to be an effective link between substantive action and financial support, and this requires close and effective cooperation and exchange of information between the United Nations system and the multilateral financial institutions for the follow-up of Agenda 21 within the institutional arrangement.

OBJECTIVES

38.7. The overall objective is the integration of environment and development issues at national, subregional, regional and international levels, including in the United Nations system institutional arrangements.

38.8. Specific objectives shall be:

(a) To ensure and review the implementation of Agenda 21 so as to achieve sustainable development in all countries;

(b) To enhance the role and functioning of the United Nations system in the field of environment and development. All relevant agencies, organizations and programmes of the United Nations system should adopt concrete programmes for the implementation of Agenda 21 and also provide policy guidance for United Nations activities or advice to Governments, upon request, within their areas of competence;

(c) To strengthen cooperation and coordination on environment and development in the United Nations system;

(d) To encourage interaction and cooperation between the United Nations system and other intergovernmental and non-governmental subregional, regional and global institutions and non-governmental organizations in the field of environment and development;

(e) To strengthen institutional capabilities and arrangements required for the effective implementation, follow-up and review of Agenda 21;

(f) To assist in the strengthening and coordination of national, subregional and regional capacities and actions in the areas of environment and development;

(g) To establish effective cooperation and exchange of information between United Nations organs, organizations, programmes and the multilateral financial bodies, within the institutional arrangements for the follow-up of Agenda 21;

(h) To respond to continuing and emerging issues relating to environment and development;

(i) To ensure that any new institutional arrangements would support revitalization, clear division of responsibilities and the avoidance of duplication in the United Nations system and depend to the maximum extent possible upon existing resources.

INSTITUTIONAL STRUCTURE

A. General Assembly

38.9. The General Assembly, as the highest intergovernmental mechanism, is the principal policy-making and appraisal organ on matters relating to the follow-up of the Conference. The Assembly would organize a regular review of the implementation of Agenda 21. In fulfilling this task, the Assembly could consider the timing, format and organizational aspects of such a review. In particular, the Assembly could consider holding a special session not later than 1997 for the overall review and appraisal of Agenda 21, with adequate preparations at a high level.

B. Economic and Social Council

38.10. The Economic and Social Council, in the context of its role under the Charter vis-à-vis the General Assembly and the ongoing restructuring and revitalization of the United Nations in the economic, social and related fields, would assist the General Assembly by overseeing system-wide coordination in the implementation of Agenda 21 and making recommendations in this regard. In addition, the Council would undertake the task of directing system-wide coordination and integration of environmental and developmental aspects of United Nations policies and programmes and would make appropriate recommendations to the General Assembly, specialized agencies concerned and Member States. Appropriate steps should be taken to obtain regular reports from specialized agencies on their plans and programmes related to the implementation of Agenda 21, pursuant to Article 64 of the Charter of the United Nations. The Economic and Social Council should organize a periodic review of the work of the Commission on Sustainable Development envisaged in paragraph 38.11, as well as of system-wide activities to integrate environment and development, making full use of its high-level and coordination segments.

C. Commission on Sustainable Development

38.11. In order to ensure the effective follow-up of the Conference, as well as to enhance international cooperation and rationalize the intergovernmental decision-making capacity for the integration of environment and development issues and to examine the progress in the implementation of Agenda 21 at the national, regional and international levels, a high-level Commission on Sustainable Development should be established in accordance with Article 68 of the Charter of the United Nations. This Commission would report to the Economic and Social Council in the context of the Council's role under the Charter vis-à-vis the General Assembly. It would consist of representatives of States elected as members with due regard to equitable geographical distribution. Representatives of non-member States of the Commission would have observer status. The Commission should provide for the active involvement of organs, programmes and organizations of the United Nations system, international financial institutions and other relevant intergovernmental organizations, and encourage the participation of non-governmental organizations, including industry and the business and scientific communities. The first meeting of the Commission should be convened no later than 1993. The Commission should be supported by the secretariat envisaged in paragraph 38.19. Meanwhile the Secretary-General of the United Nations is requested to ensure adequate interim administrative secretariat arrangements.

38.12. The General Assembly, at its forty-seventh session, should determine specific organizational modalities for the work of this Commission, such as its membership, its relationship with other intergovernmental United Nations bodies dealing with matters related to environment and development, and the frequency, duration and venue of its meetings. These modalities should take into account the ongoing process of revitalization and restructuring of the work of the United Nations in the economic, social and related fields, in particular measures recommended by the General Assembly in resolutions 45/264 of 13 May 1991 and 46/235 of 13 April 1992 and other relevant Assembly resolutions. In this respect, the Secretary-General of the United Nations, with the assistance of the Secretary-General of the United Nations Conference on Environment and Development, is requested to prepare for the Assembly a report with appropriate recommendations and proposals.

38.13. The Commission on Sustainable Development should have the following functions:

(a) To monitor progress in the implementation of Agenda 21 and activities related to the integration of environmental and developmental goals throughout the United Nations system through analysis and evaluation of reports from all relevant organs, organizations, programmes and institutions of the United Nations system dealing with various issues of environment and development, including those related to finance;

(b) To consider information provided by Governments, including, for example, information in the form of periodic communications or national

reports regarding the activities they undertake to implement Agenda 21, the problems they face, such as problems related to financial resources and technology transfer, and other environment and development issues they find relevant;

(c) To review the progress in the implementation of the commitments contained in Agenda 21, including those related to provision of financial resources and transfer of technology;

(d) To receive and analyse relevant input from competent non-governmental organizations, including the scientific and private sectors, in the context of the overall implementation of Agenda 21;

(e) To enhance the dialogue, within the framework of the United Nations, with non-governmental organizations and the independent sector, as well as other entities outside the United Nations system;

(f) To consider, where appropriate, information regarding the progress made in the implementation of environmental conventions, which could be made available by the relevant Conferences of Parties;

(g) To provide appropriate recommendations to the General Assembly through the Economic and Social Council on the basis of an integrated consideration of the reports and issues related to the implementation of Agenda 21;

(h) To consider, at an appropriate time, the results of the review to be conducted expeditiously by the Secretary-General of all recommendations of the Conference for capacity-building programmes, information networks, task forces and other mechanisms to support the integration of environment and development at regional and subregional levels.

38.14. Within the intergovernmental framework, consideration should be given to allowing non-governmental organizations, including those related to major groups, particularly women's groups, committed to the implementation of Agenda 21 to have relevant information available to them, including information, reports and other data produced within the United Nations system.

D. The Secretary-General

38.15. Strong and effective leadership on the part of the Secretary-General is crucial, since he/she would be the focal point of the institutional arrangements within the United Nations system for the successful follow-up to the Conference and for the implementation of Agenda 21.

E. High-level inter-agency coordination mechanism

38.16. Agenda 21, as the basis for action by the international community to integrate environment and development, should provide the principal framework for coordination of relevant activities within the United Nations system. To ensure effective monitoring, coordination and supervision of the involvement of the United Nations system in the follow-up to the Conference, there is a need for a coordination mechanism under the direct leadership of the Secretary-General.

38.17. This task should be given to the Administrative Committee on Coordination (ACC), headed by the Secretary-General. ACC would thus provide a vital link and interface between the multilateral financial institutions and other United Nations bodies at the highest administrative level. The Secretary-General should continue to revitalize the functioning of the Committee. All heads of agencies and institutions of the United Nations system shall be expected to cooperate with the Secretary-General fully in order to make ACC work effectively in fulfilling its crucial role and ensure successful implementation of Agenda 21. ACC should consider establishing a special task force, subcommittee or sustainable development board, taking into account the experience of the Designated Officials for Environmental Matters (DOEM) and the Committee of International Development Institutions on Environment (CIDIE), as well as the respective roles of UNEP and UNDP. Its report should be submitted to the relevant intergovernmental bodies.

F. High-level advisory body

38.18. Intergovernmental bodies, the Secretary-General and the United Nations system as a whole may also benefit from the expertise of a high-level advisory board consisting of eminent persons knowledgeable about environment and development, including relevant sciences, appointed by the Secretary-General in their personal capacity. In this regard, the Secretary-General should make appropriate recommendations to the General Assembly at its forty-seventh session.

G. Secretariat support structure

38.19. A highly qualified and competent secretariat support structure within the United Nations Secretariat, drawing, *inter alia*, on the expertise gained in the Conference preparatory process is essential for the follow-up to the Conference and the implementation of Agenda 21. This secretariat support structure should provide support to the work of both intergovernmental and inter-agency coordination mechanisms. Concrete organizational decisions fall within the competence of the Secretary-General as the chief administrative officer of the Organization, who is requested to report on the provisions to be made, covering staffing implications, as soon as practicable, taking into account gender balance as defined in Article 8 of the Charter of the United Nations and the need for the best use of existing resources in the context of the current and ongoing restructuring of the United Nations Secretariat.

H. Organs, programmes and organizations of the United Nations system

38.20. In the follow-up to the Conference, in particular the implementation of Agenda 21, all relevant organs, programmes and organizations of the United Nations system will have an important role within their respective areas of expertise and mandates in supporting and supplementing national efforts. Coordination and mutual complementarity of their efforts to promote integration of environment and development can be enhanced by encouraging countries to maintain consistent positions in the various governing bodies.

1. United Nations Environment Programme

38.21. In the follow-up to the Conference, there will be a need for an enhanced and strengthened role for UNEP and its Governing Council. The Governing Council should, within its mandate, continue to play its role with regard to policy guidance and coordination in the field of the environment, taking into account the development perspective.

38.22. Priority areas on which UNEP should concentrate include the following:

(a) Strengthening its catalytic role in stimulating and promoting environmental activities and considerations throughout the United Nations system;

(b) Promoting international cooperation in the field of environment and recommending, as appropriate, policies to this end;

(c) Developing and promoting the use of such techniques as natural resource accounting and environmental economics;

(d) Environmental monitoring and assessment, both through improved participation by the United Nations system agencies in the Earthwatch programme and expanded relations with private scientific and non-governmental research institutes; strengthening and making operational its early-warning function;

(e) Coordination and promotion of relevant scientific research with a view to providing a consolidated basis for decision-making;

(f) Dissemination of environmental information and data to Governments and to organs, programmes and organizations of the United Nations system;

(g) Raising general awareness and action in the area of environmental protection through collaboration with the general public, non-governmental entities and intergovernmental institutions;

(h) Further development of international environmental law, in particular conventions and guidelines, promotion of its implementation, and coordinating functions arising from an increasing number of international legal agreements, inter alia, the functioning of the secretariats of the Conventions, taking into account the need for the most efficient use of resources, including possible co-location of secretariats established in the future;

(i) Further development and promotion of the widest possible use of environmental impact assessments, including activities carried out under the auspices of specialized agencies of the United Nations system, and in connection with every significant economic development project or activity;

(j) Facilitation of information exchange on environmentally sound technologies, including legal aspects, and provision of training;

(k) Promotion of subregional and regional cooperation and support to relevant initiatives and programmes for environmental protection, including playing a major contributing and coordinating role in the regional mechanisms in the field of environment identified for the follow-up to the Conference;

(l) Provision of technical, legal and institutional advice to Governments, upon request, in establishing and enhancing their national legal and institutional frameworks, in particular, in cooperation with UNDP capacity-building efforts;

(m) Support to Governments, upon request, and development agencies and organs in the integration of environmental aspects into their development policies and programmes, in particular through provision of environmental, technical and policy advice during programme formulation and implementation;

(n) Further developing assessment and assistance in cases of environmental emergencies.

38.23. In order to perform all of these functions, while retaining its role as the principal body within the United Nations system in the field of environment and taking into account the development aspects of environmental questions, UNEP would require access to greater expertise and provision of adequate financial resources and it would require closer cooperation and collaboration with development organs and other relevant organs of the United Nations system. Furthermore, the regional offices of UNEP should be strengthened without weakening its headquarters in Nairobi, and UNEP should take steps to reinforce and intensify its liaison and interaction with UNDP and the World Bank.

2. United Nations Development Programme

38.24. UNDP, like UNEP, also has a crucial role in the follow-up to the United Nations Conference on Environment and Development. Through its network of field offices it would foster the United Nations system's collective thrust in support of the implementation of Agenda 21, at the country, regional, interregional and global levels, drawing on the expertise of the specialized agencies and other United Nations organizations and bodies involved in operational activities. The role of the resident representative/resident coordinator of UNDP needs to be strengthened in order to coordinate the field-level activities of the United Nations operational activities.

38.25. Its role should include the following:

(a) Acting as the lead agency in organizing United Nations system efforts towards capacity-building at the local, national and regional levels;

(b) Mobilizing donor resources on behalf of Governments for capacity-building in recipient countries and, where appropriate, through the use of the UNDP donor round-table mechanisms;

(c) Strengthening its own programmes in support of follow-up to the Conference without prejudice to the fifth programming cycle;

(d) Assisting recipient countries, upon request, in the establishment and strengthening of national coordination mechanisms and networks related to activities for the follow-up to the Conference;

(e) Assisting recipient countries, upon request, in coordinating the mobilization of domestic financial resources;

(f) Promoting and strengthening the role and involvement of women, youth and other major groups in recipient countries in the implementation of Agenda 21.

3. United Nations Conference on Trade and Development

38.26. UNCTAD should play an important role in the implementation of Agenda 21 as extended at its eighth session, taking into account the importance of the interrelationships between development, international trade and the environment and in accordance with its mandate in the area of sustainable development.

4. United Nations Sudano-Sahelian Office

38.27. The role of the United Nations Sudano-Sahelian Office (UNSO), with added resources that may become available, operating under the umbrella of UNDP and with the support of UNEP, should be strengthened so that it can

assume an appropriate major advisory role and participate effectively in the implementation of Agenda 21 provisions related to combating drought and desertification and to land resource management. In this context, the experience gained could be used by all other countries affected by drought and desertification, in particular those in Africa, with special attention to countries most affected or classified as least developed countries.

5. Specialized agencies of the United Nations system and related organizations and other relevant intergovernmental organizations

38.28. All specialized agencies of the United Nations system, related organizations and other relevant intergovernmental organizations within their respective fields of competence have an important role to play in the implementation of relevant parts of Agenda 21 and other decisions of the Conference. Their governing bodies may consider ways of strengthening and adjusting activities and programmes in line with Agenda 21, in particular, regarding projects for promoting sustainable development. Furthermore, they may consider establishing special arrangements with donors and financial institutions for project implementation that may require additional resources.

I. Regional and subregional cooperation and implementation

38.29. Regional and subregional cooperation will be an important part of the outcome of the Conference. The regional commissions, regional development banks and regional economic and technical cooperation organizations, within their respective agreed mandates, can contribute to this process by:

(a) Promoting regional and subregional capacity-building;

(b) Promoting the integration of environmental concerns in regional and subregional development policies;

(c) Promoting regional and subregional cooperation, where appropriate, regarding transboundary issues related to sustainable development.

38.30. The regional commissions, as appropriate, should play a leading role in coordinating regional and subregional activities by sectoral and other United Nations bodies and shall assist countries in achieving sustainable development. The commissions and regional programmes within the United Nations system, as well as other regional organizations, should review the need for modification of ongoing activities, as appropriate, in light of Agenda 21.

38.31. There must be active cooperation and collaboration among the regional commissions and other relevant organizations, regional development banks, non-governmental organizations and other institutions at the regional level. UNEP and UNDP, together with the regional commissions, would have a crucial

role to play, especially in providing the necessary assistance, with particular emphasis on building and strengthening the national capacity of Member States.

38.32. There is a need for closer cooperation between UNEP and UNDP, together with other relevant institutions, in the implementation of projects to halt environmental degradation or its impact and to support training programmes in environmental planning and management for sustainable development at the regional level.

38.33. Regional intergovernmental technical and economic organizations have an important role to play in helping Governments to take coordinated action in solving environment issues of regional significance.

38.34. Regional and subregional organizations should play a major role in the implementation of the provisions of Agenda 21 related to combating drought and desertification. UNEP, UNDP and UNSO should assist and cooperate with those relevant organizations.

38.35. Cooperation between regional and subregional organizations and relevant organizations of the United Nations system should be encouraged, where appropriate, in other sectoral areas.

J. National implementation

38.36. States have an important role to play in the follow-up of the Conference and the implementation of Agenda 21. National level efforts should be undertaken by all countries in an integrated manner so that both environment and development concerns can be dealt with in a coherent manner.

38.37. Policy decisions and activities at the national level, tailored to support and implement Agenda 21, should be supported by the United Nations system upon request.

38.38. Furthermore, States could consider the preparation of national reports. In this context, the organs of the United Nations system should, upon request, assist countries, in particular developing countries. Countries could also consider the preparation of national action plans for the implementation of Agenda 21.

38.39. Existing assistance consortia, consultative groups and round tables should make greater efforts to integrate environmental considerations and related development objectives into their development assistance strategies and should consider reorienting and appropriately adjusting their memberships and operations to facilitate this process and better support national efforts to integrate environment and development.

38.40. States may wish to consider setting up a national coordination structure responsible for the follow-up of Agenda 21. Within this structure, which would benefit from the expertise of non-governmental organizations, submissions and other relevant information could be made to the United Nations.

K. Cooperation between United Nations bodies and international financial organizations

38.41. The success of the follow-up to the Conference is dependent upon an effective link between substantive action and financial support, and this requires close and effective cooperation between United Nations bodies and the multilateral financial organizations. The Secretary-General and heads of United Nations programmes, organizations and the multilateral financial organizations have a special responsibility in forging such cooperation, not only through the United Nations high-level coordination mechanism (Administrative Committee on Coordination) but also at regional and national levels. In particular, representatives of multilateral financial institutions and mechanisms, as well as IFAD, should actively be associated with deliberations of the intergovernmental structure responsible for the follow-up to Agenda 21.

L. Non-governmental organizations

38.42. Non-governmental organizations and major groups are important partners in the implementation of Agenda 21. Relevant non-governmental organizations, including the scientific community, the private sector and women's groups, should be given opportunities to make their contributions and establish appropriate relationships with the United Nations system. Support should be provided for developing countries' non-governmental organizations and their self-organized networks.

38.43. The United Nations system, including international finance and development agencies, and all intergovernmental organizations and forums should, in consultation with non-governmental organizations, take measures to:

(a) Design open and effective means to achieve the participation of non-governmental organizations, including those related to major groups, in the process established to review and evaluate the implementation of Agenda 21 at all levels and promote their contribution to it;

(b) Take into account the findings of review systems and evaluation processes of non-governmental organizations in relevant reports of the Secretary-General to the General Assembly and all pertinent United Nations agencies and intergovernmental organizations and forums concerning implementation of Agenda 21 in accordance with the review process.

38.44. Procedures should be established for an expanded role for non-governmental organizations, including those related to major groups, with accreditation based on the procedures used for the Conference. Such organizations should have access to reports and other information produced by the United Nations system. The General Assembly, at an early stage, should examine ways of enhancing the involvement of non-governmental organizations within the United Nations system in relation to the follow-up process of the Conference.

38.45. The Conference takes note of other institutional initiatives for the implementation of Agenda 21, such as the proposal to establish a non-governmental Earth Council and the proposal to appoint a guardian for future generations, as well as other initiatives taken by local governments and business sectors.

Chapter 39

INTERNATIONAL LEGAL INSTRUMENTS AND MECHANISMS

Basis for action

39.1. The recognition that the following vital aspects of the universal, multilateral and bilateral treaty-making process should be taken into account:

(a) The further development of international law on sustainable development, giving special attention to the delicate balance between environmental and developmental concerns;

(b) The need to clarify and strengthen the relationship between existing international instruments or agreements in the field of environment and relevant social and economic agreements or instruments, taking into account the special needs of developing countries;

(c) At the global level, the essential importance of the participation in and the contribution of all countries, including the developing countries, to treaty making in the field of international law on sustainable development. Many of the existing international legal instruments and agreements in the field of environment have been developed without adequate participation and contribution of developing countries, and thus may require review in order to reflect the concerns and interests of developing countries and to ensure a balanced governance of such instruments and agreements;

(d) Developing countries should also be provided with technical assistance in their attempts to enhance their national legislative capabilities in the field of environmental law;

(e) Future projects for the progressive development and codification of international law on sustainable development should take into account the ongoing work of the International Law Commission;

(f) Any negotiations for the progressive development and codification of international law concerning sustainable development should, in general, be conducted on a universal basis, taking into account special circumstances in the various regions.

Objectives

39.2. The overall objective of the review and development of international environmental law should be to evaluate and to promote the efficacy of that law and to promote the integration of environment and development policies through effective international agreements or instruments taking into account both universal principles and the particular and differentiated needs and concerns of all countries.

39.3. Specific objectives are:

(a) To identify and address difficulties which prevent some States, in particular developing countries, from participating in or duly implementing international agreements or instruments and, where appropriate, to review and revise them with the purposes of integrating environmental and developmental concerns and laying down a sound basis for the implementation of these agreements or instruments;

(b) To set priorities for future law-making on sustainable development at the global, regional or subregional level, with a view to enhancing the efficacy of international law in this field through, in particular, the integration of environmental and developmental concerns;

(c) To promote and support the effective participation of all countries concerned, in particular developing countries, in the negotiation, implementation, review and governance of international agreements or instruments, including appropriate provision of technical and financial assistance and other available mechanisms for this purpose, as well as the use of differential obligations where appropriate;

(d) To promote, through the gradual development of universally and multilaterally negotiated agreements or instruments, international standards for the protection of the environment that take into account the different situations and capabilities of countries. States recognize that environmental policies should deal with the root causes of environmental degradation, thus preventing environmental measures from resulting in unnecessary restrictions to trade. Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade. Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing international environmental problems should, as far as possible, be based on an international consensus. Domestic measures targeted to achieve certain environmental objectives may need trade measures to render them effective. Should trade policy measures be found necessary for the enforcement of environmental policies, certain principles and rules should apply. These could include, inter alia, the principle of non-discrimination; the principle that the trade measure chosen should be the least trade-restrictive necessary to achieve the objectives; an obligation to ensure transparency in the use of trade measures related to the environment and to provide adequate notification of national regulations; and the need to give consideration to the special conditions and development requirements of developing countries as they move towards internationally agreed environmental objectives;

(e) To ensure the effective, full and prompt implementation of legally binding instruments and to facilitate timely review and adjustment of agreements or instruments by the parties concerned, taking into account the special needs and concerns of all countries, in particular developing countries;

(f) To improve the effectiveness of institutions, mechanisms and ·ocedures for the administration of agreements and instruments;

(g) To identify and prevent actual or potential conflicts, particularly :tween environmental and social/economic agreements or instruments, with a .ew to ensuring that such agreements or instruments are consistent. Where ›nflicts arise they should be appropriately resolved;

(h) To study and consider the broadening and strengthening of the ıpacity of mechanisms, inter alia, in the United Nations system, to ıcilitate, where appropriate and agreed to by the parties concerned, the lentification, avoidance and settlement of international disputes in the .eld of sustainable development, duly taking into account existing bilateral ıd multilateral agreements for the settlement of such disputes.

:tivities

.4. Activities and means of implementation should be considered in the ght of the above basis for action and objectives, without prejudice to the ght of every State to put forward suggestions in this regard in the General sembly. These suggestions could be reproduced in a separate compilation on stainable development.

A. Review, assessment and fields of action in international law for sustainable development

.5. While ensuring the effective participation of all countries concerned, rties should at periodic intervals review and assess both the past rformance and effectiveness of existing international agreements or struments as well as the priorities for future law making on sustainable velopment. This may include an examination of the feasibility of aborating general rights and obligations of States, as appropriate, in the eld of sustainable development, as provided by General Assembly solution 44/228. In certain cases, attention should be given to the ssibility of taking into account varying circumstances through differential ligations or gradual application. As an option for carrying out this task, rlier UNEP practice may be followed whereby legal experts designated by vernments could meet at suitable intervals, to be decided later, with a oader environmental and developmental perspective.

.6. Measures in accordance with international law should be considered to dress, in times of armed conflict, large-scale destruction of the vironment that cannot be justified under international law. The General sembly and its Sixth Committee are the appropriate forums to deal with this bject. The specific competence and role of the International Committee of e Red Cross should be taken into account.

.7. In view of the vital necessity of ensuring safe and environmentally und nuclear power, and in order to strengthen international cooperation in

this field, efforts should be made to conclude the ongoing negotiations for a nuclear safety convention in the framework of the International Atomic Energy Agency.

B. Implementation mechanisms

39.8. The parties to international agreements should consider procedures and mechanisms to promote and review their effective, full and prompt implementation. To that effect, States could, inter alia:

(a) Establish efficient and practical reporting systems on the effective, full and prompt implementation of international legal instruments;

(b) Consider appropriate ways in which relevant international bodies, such as UNEP, might contribute towards the further development of such mechanisms.

C. Effective participation in international law making

39.9. In all these activities and others that may be pursued in the future, based on the above basis for action and objectives, the effective participation of all countries, in particular developing countries, should be ensured through appropriate provision of technical assistance and/or financial assistance. Developing countries should be given "headstart" support not only in their national efforts to implement international agreements or instruments, but also to participate effectively in the negotiation of new or revised agreements or instruments and in the actual international operation of such agreements or instruments. Support should include assistance in building up expertise in international law particularly in relation to sustainable development, and in assuring access to the necessary reference information and scientific/technical expertise.

D. Disputes in the field of sustainable development

39.10. In the area of avoidance and settlement of disputes, States should further study and consider methods to broaden and make more effective the range of techniques available at present, taking into account, among others, relevant experience under existing international agreements, instruments or institutions and, where appropriate, their implementing mechanisms such as modalities for dispute avoidance and settlement. This may include mechanisms and procedures for the exchange of data and information, notification and consultation regarding situations that might lead to disputes with other States in the field of sustainable development and for effective peaceful means of dispute settlement in accordance with the Charter of the United Nations, including, where appropriate, recourse to the International Court of Justice, and their inclusion in treaties relating to sustainable development.

Chapter 40

INFORMATION FOR DECISION-MAKING

INTRODUCTION

40.1. In sustainable development, everyone is a user and provider of information considered in the broad sense. That includes data, information, appropriately packaged experience and knowledge. The need for information arises at all levels, from that of senior decision makers at the national and international levels to the grass-roots and individual levels. The following two programme areas need to be implemented to ensure that decisions are based increasingly on sound information:

(a) Bridging the data gap;

(b) Improving information availability.

PROGRAMME AREAS

A. Bridging the data gap

Basis for action

40.2. While considerable data already exist, as the various sectoral chapters of Agenda 21 indicate, more and different types of data need to be collected, at the local, provincial, national and international levels, indicating the status and trends of the planet's ecosystem, natural resource, pollution and socio-economic variables. The gap in the availability, quality, coherence, standardization and accessibility of data between the developed and the developing world has been increasing, seriously impairing the capacities of countries to make informed decisions concerning environment and development.

40.3. There is a general lack of capacity, particularly in developing countries, and in many areas at the international level, for the collection and assessment of data, for their transformation into useful information and for their dissemination. There is also need for improved coordination among environmental, demographic, social and developmental data and information activities.

40.4. Commonly used indicators such as the gross national product (GNP) and measurements of individual resource or pollution flows do not provide adequate indications of sustainability. Methods for assessing interactions between different sectoral environmental, demographic, social and developmental parameters are not sufficiently developed or applied. Indicators of sustainable development need to be developed to provide solid bases for decision-making at all levels and to contribute to a self-regulating sustainability of integrated environment and development systems.

Objectives

40.5. The following objectives are important:

(a) To achieve more cost-effective and relevant data collection and assessment by better identification of users, in both the public and private sectors, and of their information needs at the local, provincial, national and international levels;

(b) To strengthen local, provincial, national and international capacity to collect and use multisectoral information in decision-making processes and to enhance capacities to collect and analyse data and information for decision-making, particularly in developing countries;

(c) To develop or strengthen local, provincial, national and international means of ensuring that planning for sustainable development in all sectors is based on timely, reliable and usable information;

(d) To make relevant information accessible in the form and at the time required to facilitate its use.

Activities

(a) Development of indicators of sustainable development

40.6. Countries at the national level and international governmental and non-governmental organizations at the international level should develop the concept of indicators of sustainable development in order to identify such indicators. In order to promote the increasing use of some of those indicators in satellite accounts, and eventually in national accounts, the development of indicators needs to be pursued by the Statistical Office of the United Nations Secretariat, as it draws upon evolving experience in this regard.

(b) Promotion of global use of indicators of sustainable development

40.7. Relevant organs and organizations of the United Nations system, in cooperation with other international governmental, intergovernmental and non-governmental organizations, should use a suitable set of sustainable development indicators and indicators related to areas outside of national jurisdiction, such as the high seas, the upper atmosphere and outer space. The organs and organizations of the United Nations system, in coordination with other relevant international organizations, could provide recommendations for harmonized development of indicators at the national, regional and global levels, and for incorporation of a suitable set of these indicators in common, regularly updated, and widely accessible reports and databases, for use at the international level, subject to national sovereignty considerations.

(c) Improvement of data collection and use

40.8. Countries and, upon request, international organizations should carry out inventories of environmental, resource and developmental data, based on national/global priorities for the management of sustainable development. They should determine the gaps and organize activities to fill those gaps. Within the organs and organizations of the United Nations system and relevant international organizations, data-collection activities, including those of Earthwatch and World Weather Watch, need to be strengthened, especially in the areas of urban air, freshwater, land resources (including forests and rangelands), desertification, other habitats, soil degradation, biodiversity, the high seas and the upper atmosphere. Countries and international organizations should make use of new techniques of data collection, including satellite-based remote sensing. In addition to the strengthening of existing development-related data collection, special attention needs to be paid to such areas as demographic factors, urbanization, poverty, health and rights of access to resources, as well as special groups, including women, indigenous peoples, youth, children and the disabled, and their relationships with environment issues.

(d) Improvement of methods of data assessment and analysis

40.9. Relevant international organizations should develop practical recommendations for coordinated, harmonized collection and assessment of data at the national and international levels. National and international data and information centres should set up continuous and accurate data-collection systems and make use of geographic information systems, expert systems, models and a variety of other techniques for the assessment and analysis of data. These steps will be particularly relevant, as large quantities of data from satellite sources will need to be processed in the future. Developed countries and international organizations, as well as the private sector, should cooperate, in particular with developing countries, upon request, to facilitate their acquiring these technologies and this know-how.

(e) Establishment of a comprehensive information framework

40.10. Governments should consider undertaking the necessary institutional changes at the national level to achieve the integration of environmental and developmental information. At the international level, environmental assessment activities need to be strengthened and coordinated with efforts to assess development trends.

(f) Strengthening of the capacity for traditional information

40.11. Countries, with the cooperation of international organizations, should establish supporting mechanisms to provide local communities and resource users with the information and know-how they need to manage their environment and resources sustainably, applying traditional and indigenous knowledge and approaches when appropriate. This is particularly relevant for rural and urban populations and indigenous, women's and youth groups.

Means of implementation

(a) Financing and cost evaluation

40.12. The secretariat of the Conference has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $1.9 billion from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Institutional means

40.13. Institutional capacity to integrate environment and development and to develop relevant indicators is lacking at both the national and international levels. Existing institutions and programmes such as the Global Environmental Monitoring System (GEMS) and the Global Resource Information Database (GRID) within UNEP and different entities within the systemwide Earthwatch will need to be considerably strengthened. Earthwatch has been an essential element for environment-related data. While programmes related to development data exist in a number of agencies, there is insufficient coordination between them. The activities related to development data of agencies and institutions of the United Nations system should be more effectively coordinated, perhaps through an equivalent and complementary "Development Watch", which with the existing Earthwatch should be coordinated through an appropriate office within the United Nations to ensure the full integration of environment and development concerns.

(c) Scientific and technological means

40.14. Regarding transfer of technology, with the rapid evolution of data-collection and information technologies it is necessary to develop guidelines and mechanisms for the rapid and continuous transfer of those technologies, particularly to developing countries, in conformity with chapter 34 (Transfer of environmentally sound technology, cooperation and capacity-building), and for the training of personnel in their utilization.

(d) Human resource development

40.15. International cooperation for training in all areas and at all levels will be required, particularly in developing countries. That training will have to include technical training of those involved in data collection, assessment and transformation, as well as assistance to decision makers concerning how to use such information.

(e) Capacity-building

40.16. All countries, particularly developing countries, with the support of international cooperation, should strengthen their capacity to collect, store, organize, assess and use data in decision-making more effectively.

B. Improving availability of information

Basis for action

40.17. There already exists a wealth of data and information that could be used for the management of sustainable development. Finding the appropriate information at the required time and at the relevant scale of aggregation is a difficult task.

40.18. Information within many countries is not adequately managed, because of shortages of financial resources and trained manpower, lack of awareness of the value and availability of such information and other immediate or pressing problems, especially in developing countries. Even where information is available, it may not be easily accessible, either because of the lack of technology for effective access or because of associated costs, especially for information held outside the country and available commercially.

Objectives

40.19. Existing national and international mechanisms of information processing and exchange, and of related technical assistance, should be strengthened to ensure effective and equitable availability of information generated at the local, provincial, national and international levels, subject to national sovereignty and relevant intellectual property rights.

40.20. National capacities should be strengthened, as should capacities within Governments, non-governmental organizations and the private sector, in information handling and communication, particularly within developing countries.

40.21. Full participation of, in particular, developing countries should be ensured in any international scheme under the organs and organizations of the United Nations system for the collection, analysis and use of data and information.

Activities

(a) Production of information usable for decision-making

40.22. Countries and international organizations should review and strengthen information systems and services in sectors related to sustainable development, at the local, provincial, national and international levels. Special emphasis should be placed on the transformation of existing information into forms more useful for decision-making and on targeting information at different user groups. Mechanisms should be strengthened or established for transforming scientific and socio-economic assessments into information suitable for both planning and public information. Electronic and non-electronic formats should be used.

(b) Establishment of standards and methods for handling information

40.23. Governments should consider supporting the efforts of governmental as well as non-governmental organizations to develop mechanisms for efficient and harmonized exchange of information at the local, national, provincial and international levels, including revision and establishment of data, access and dissemination formats, and communication interfaces.

(c) Development of documentation about information

40.24. The organs and organizations of the United Nations system, as well as other governmental and non-governmental organizations, should document and share information about the sources of available information in their respective organizations. Existing programmes, such as those of the Advisory Committee for the Coordination of Information Systems (ACCIS) and the International Environmental Information System (INFOTERRA), should be reviewed and strengthened as required. Networking and coordinating mechanisms should be encouraged between the wide variety of other actors, including arrangements with non-governmental organizations for information sharing and donor activities for sharing information on sustainable development projects. The private sector should be encouraged to strengthen the mechanisms of sharing its experience and information on sustainable development.

(d) Establishment and strengthening of electronic networking capabilities

40.25. Countries, international organizations, including organs and organizations of the United Nations system, and non-governmental organizations should exploit various initiatives for electronic links to support information sharing, to provide access to databases and other information sources, to facilitate communication for meeting broader objectives, such as the implementation of Agenda 21, to facilitate intergovernmental negotiations, to monitor conventions and efforts for sustainable development to transmit environmental alerts, and to transfer technical data. These organizations should also facilitate the linkage of different electronic networks and the use of appropriate standards and communication protocols for the transparent interchange of electronic communications. Where necessary, new technology should be developed and its use encouraged to permit participation of those not served at present by existing infrastructure and methods. Mechanisms should also be established to carry out the necessary transfer of information to and from non-electronic systems to ensure the involvement of those not able to participate in this way.

(e) Making use of commercial information sources

40.26. Countries and international organizations should consider undertaking surveys of information available in the private sector on sustainable development and of present dissemination arrangements to determine gaps and how those gaps could be filled by commercial or quasi-commercial activity, particularly activities in and/or involving developing countries where feasible. Whenever economic or other constraints on supplying and accessing

information arise, particularly in developing countries, innovative schemes for subsidizing such information-related access or removing the non-economic constraints should be considered.

Means of implementation

(a) Financing and cost evaluation

40.27. The secretariat of the Conference has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $165 million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Institutional means

40.28. The institutional implications of this programme concern mostly the strengthening of already existing institutions, as well as the strengthening of cooperation with non-governmental organizations, and need to be consistent with the overall decisions on institutions made by the United Nations Conference on Environment and Development.

(c) Capacity-building

40.29. Developed countries and relevant international organizations should cooperate, in particular with developing countries, to expand their capacity to receive, store and retrieve, contribute, disseminate, use and provide appropriate public access to relevant environmental and developmental information, by providing technology and training to establish local information services and by supporting partnership and cooperative arrangements between countries and on the regional or subregional level.

(d) Scientific and technological means

40.30. Developed countries and relevant international organizations should support research and development in hardware, software and other aspects of information technology, in particular in developing countries, appropriate to their operations, national needs and environmental contexts.

Annex III

NON-LEGALLY BINDING AUTHORITATIVE STATEMENT OF PRINCIPLES FOR A GLOBAL CONSENSUS ON THE MANAGEMENT, CONSERVATION AND SUSTAINABLE DEVELOPMENT OF ALL TYPES OF FORESTS

PREAMBLE

(a) The subject of forests is related to the entire range of environmental and development issues and opportunities, including the right to socio-economic development on a sustainable basis.

(b) The guiding objective of these principles is to contribute to the management, conservation and sustainable development of forests and to provide for their multiple and complementary functions and uses.

(c) Forestry issues and opportunities should be examined in a holistic and balanced manner within the overall context of environment and development, taking into consideration the multiple functions and uses of forests, including traditional uses, and the likely economic and social stress when these uses are constrained or restricted, as well as the potential for development that sustainable forest management can offer.

(d) These principles reflect a first global consensus on forests. In committing themselves to the prompt implementation of these principles, countries also decide to keep them under assessment for their adequacy with regard to further international cooperation on forest issues.

(e) These principles should apply to all types of forests, both natural and planted, in all geographical regions and climatic zones, including austral, boreal, subtemperate, temperate, subtropical and tropical.

(f) All types of forests embody complex and unique ecological processes which are the basis for their present and potential capacity to provide resources to satisfy human needs as well as environmental values, and as such their sound management and conservation is of concern to the Governments of the countries to which they belong and are of value to local communities and to the environment as a whole.

(g) Forests are essential to economic development and the maintenance of all forms of life.

(h) Recognizing that the responsibility for forest management, conservation and sustainable development is in many States allocated among federal/national, state/provincial and local levels of government, each State, in accordance with its constitution and/or national legislation, should pursue these principles at the appropriate level of government.

PRINCIPLES/ELEMENTS

1. (a) States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies and have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

(b) The agreed full incremental cost of achieving benefits associated with forest conservation and sustainable development requires increased international cooperation and should be equitably shared by the international community.

2. (a) States have the sovereign and inalienable right to utilize, manage and develop their forests in accordance with their development needs and level of socio-economic development and on the basis of national policies consistent with sustainable development and legislation, including the conversion of such areas for other uses within the overall socio-economic development plan and based on rational land-use policies.

(b) Forest resources and forest lands should be sustainably managed to meet the social, economic, ecological, cultural and spiritual needs of present and future generations. These needs are for forest products and services, such as wood and wood products, water, food, fodder, medicine, fuel, shelter, employment, recreation, habitats for wildlife, landscape diversity, carbon sinks and reservoirs, and for other forest products. Appropriate measures should be taken to protect forests against harmful effects of pollution, including air-borne pollution, fires, pests and diseases, in order to maintain their full multiple value.

(c) The provision of timely, reliable and accurate information on forests and forest ecosystems is essential for public understanding and informed decision-making and should be ensured.

(d) Governments should promote and provide opportunities for the participation of interested parties, including local communities and indigenous people, industries, labour, non-governmental organizations and individuals, forest dwellers and women, in the development, implementation and planning of national forest policies.

3. (a) National policies and strategies should provide a framework for increased efforts, including the development and strengthening of institutions and programmes for the management, conservation and sustainable development of forests and forest lands.

(b) International institutional arrangements, building on those organizations and mechanisms already in existence, as appropriate, should facilitate international cooperation in the field of forests.

(c) All aspects of environmental protection and social and economic development as they relate to forests and forest lands should be integrated and comprehensive.

4. The vital role of all types of forests in maintaining the ecological processes and balance at the local, national, regional and global levels through, inter alia, their role in protecting fragile ecosystems, watersheds and freshwater resources and as rich storehouses of biodiversity and biological resources and sources of genetic material for biotechnology products, as well as photosynthesis, should be recognized.

5. (a) National forest policies should recognize and duly support the identity, culture and the rights of indigenous people, their communities and other communities and forest dwellers. Appropriate conditions should be promoted for these groups to enable them to have an economic stake in forest use, perform economic activities, and achieve and maintain cultural identity and social organization, as well as adequate levels of livelihood and well-being, through, inter alia, those land tenure arrangements which serve as incentives for the sustainable management of forests.

(b) The full participation of women in all aspects of the management, conservation and sustainable development of forests should be actively promoted.

6. (a) All types of forests play an important role in meeting energy requirements through the provision of a renewable source of bio-energy, particularly in developing countries, and the demands for fuelwood for household and industrial needs should be met through sustainable forest management, afforestation and reforestation. To this end, the potential contribution of plantations of both indigenous and introduced species for the provision of both fuel and industrial wood should be recognized.

(b) National policies and programmes should take into account the relationship, where it exists, between the conservation, management and sustainable development of forests and all aspects related to the production, consumption, recycling and/or final disposal of forest products.

(c) Decisions taken on the management, conservation and sustainable development of forest resources should benefit, to the extent practicable, from a comprehensive assessment of economic and non-economic values of forest goods and services and of the environmental costs and benefits. The development and improvement of methodologies for such evaluations should be promoted.

(d) The role of planted forests and permanent agricultural crops as sustainable and environmentally sound sources of renewable energy and industrial raw material should be recognized, enhanced and promoted. Their contribution to the maintenance of ecological processes, to offsetting pressure on primary/old-growth forest and to providing regional employment and development with the adequate involvement of local inhabitants should be recognized and enhanced.

(e) Natural forests also constitute a source of goods and services, and their conservation, sustainable management and use should be promoted.

7. (a) Efforts should be made to promote a supportive international economic climate conducive to sustained and environmentally sound development of forests in all countries, which include, inter alia, the promotion of sustainable patterns of production and consumption, the eradication of poverty and the promotion of food security.

(b) Specific financial resources should be provided to developing countries with significant forest areas which establish programmes for the conservation of forests including protected natural forest areas. These resources should be directed notably to economic sectors which would stimulate economic and social substitution activities.

8. (a) Efforts should be undertaken towards the greening of the world. All countries, notably developed countries, should take positive and transparent action towards reforestation, afforestation and forest conservation, as appropriate.

(b) Efforts to maintain and increase forest cover and forest productivity should be undertaken in ecologically, economically and socially sound ways through the rehabilitation, reforestation and re-establishment of trees and forests on unproductive, degraded and deforested lands, as well as through the management of existing forest resources.

(c) The implementation of national policies and programmes aimed at forest management, conservation and sustainable development, particularly in developing countries, should be supported by international financial and technical cooperation, including through the private sector, where appropriate.

(d) Sustainable forest management and use should be carried out in accordance with national development policies and priorities and on the basis of environmentally sound national guidelines. In the formulation of such guidelines, account should be taken, as appropriate and if applicable, of relevant internationally agreed methodologies and criteria.

(e) Forest management should be integrated with management of adjacent areas so as to maintain ecological balance and sustainable productivity.

(f) National policies and/or legislation aimed at management, conservation and sustainable development of forests should include the protection of ecologically viable representative or unique examples of forests, including primary/old-growth forests, cultural, spiritual, historical, religious and other unique and valued forests of national importance.

(g) Access to biological resources, including genetic material, shall be with due regard to the sovereign rights of the countries where the forests are located and to the sharing on mutually agreed terms of technology and profits from biotechnology products that are derived from these resources.

(h) National policies should ensure that environmental impact assessments should be carried out where actions are likely to have significant adverse impacts on important forest resources, and where such actions are subject to a decision of a competent national authority.

9. (a) The efforts of developing countries to strengthen the management, conservation and sustainable development of their forest resources should be supported by the international community, taking into account the importance of redressing external indebtedness, particularly where aggravated by the net transfer of resources to developed countries, as well as the problem of achieving at least the replacement value of forests through improved market access for forest products, especially processed products. In this respect, special attention should also be given to the countries undergoing the process of transition to market economies.

(b) The problems that hinder efforts to attain the conservation and sustainable use of forest resources and that stem from the lack of alternative options available to local communities, in particular the urban poor and poor rural populations who are economically and socially dependent on forests and forest resources, should be addressed by Governments and the international community.

(c) National policy formulation with respect to all types of forests should take account of the pressures and demands imposed on forest ecosystems and resources from influencing factors outside the forest sector, and intersectoral means of dealing with these pressures and demands should be sought.

10. New and additional financial resources should be provided to developing countries to enable them to sustainably manage, conserve and develop their forest resources, including through afforestation, reforestation and combating deforestation and forest and land degradation.

11. In order to enable, in particular, developing countries to enhance their endogenous capacity and to better manage, conserve and develop their forest resources, the access to and transfer of environmentally sound technologies and corresponding know-how on favourable terms, including on concessional and preferential terms, as mutually agreed, in accordance with the relevant provisions of Agenda 21, should be promoted, facilitated and financed, as appropriate.

12. (a) Scientific research, forest inventories and assessments carried out by national institutions which take into account, where relevant, biological, physical, social and economic variables, as well as technological development and its application in the field of sustainable forest management, conservation and development, should be strengthened through effective modalities, including international cooperation. In this context, attention should also be given to research and development of sustainably harvested non-wood products.

(b) National and, where appropriate, regional and international institutional capabilities in education, training, science, technology, economics, anthropology and social aspects of forests and forest management are essential to the conservation and sustainable development of forests and should be strengthened.

(c) International exchange of information on the results of forest and forest management research and development should be enhanced and broadened, as appropriate, making full use of education and training institutions, including those in the private sector.

(d) Appropriate indigenous capacity and local knowledge regarding the conservation and sustainable development of forests should, through institutional and financial support and in collaboration with the people in the local communities concerned, be recognized, respected, recorded, developed and, as appropriate, introduced in the implementation of programmes. Benefits arising from the utilization of indigenous knowledge should therefore be equitably shared with such people.

13. (a) Trade in forest products should be based on non-discriminatory and multilaterally agreed rules and procedures consistent with international trade law and practices. In this context, open and free international trade in forest products should be facilitated.

(b) Reduction or removal of tariff barriers and impediments to the provision of better market access and better prices for higher value-added forest products and their local processing should be encouraged to enable producer countries to better conserve and manage their renewable forest resources.

(c) Incorporation of environmental costs and benefits into market forces and mechanisms, in order to achieve forest conservation and sustainable development, should be encouraged both domestically and internationally.

(d) Forest conservation and sustainable development policies should be integrated with economic, trade and other relevant policies.

(e) Fiscal, trade, industrial, transportation and other policies and practices that may lead to forest degradation should be avoided. Adequate policies, aimed at management, conservation and sustainable development of forests, including, where appropriate, incentives, should be encouraged.

14. Unilateral measures, incompatible with international obligations or agreements, to restrict and/or ban international trade in timber or other forest products should be removed or avoided, in order to attain long-term sustainable forest management.

15. Pollutants, particularly air-borne pollutants, including those responsible for acidic deposition, that are harmful to the health of forest ecosystems at the local, national, regional and global levels should be controlled.

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COMMITTEE FOR A FRAMEWORK
CONVENTION ON CLIMATE CHANGE
First session
Washington, D.C., 4-14 February 1991

REPORT OF THE INTERGOVERNMENTAL NEGOTIATING COMMITTEE FOR A FRAMEWORK CONVENTION ON CLIMATE CHANGE ON THE WORK OF ITS FIRST SESSION, HELD AT WASHINGTON, D.C., FROM 4 TO 14 FEBRUARY 1991

CONTENTS

		Paragraphs	Page
I.	INTRODUCTION	1 - 2	3
II.	ORGANIZATIONAL MATTERS	3 - 39	3
A.	Opening of the session	3 - 13	3
B.	Attendance	14 - 18	7
C.	Election of officers	19 - 23	9
D.	Documentation	24	9
E.	Secretariat	25 - 26	10
F.	Adoption of the rules of procedure	27 - 31	10
G.	Adoption of the agenda	32	11
H.	Participation of non-governmental organizations	33	11
I.	Establishment of subsidiary organs and organization of work	34 - 39	12

CONTENTS (continued)

		Paragraphs	Page
III.	SUBSTANTIVE MATTERS	40 - 68	12
	A. General debate	40 - 60	12
	B. Relations with the Intergovernmental Panel on Climate Change	61	15
	C. Funds set up pursuant to General Assembly resolution 45/212	62 - 68	16
IV.	ARRANGEMENTS FOR FUTURE SESSIONS OF THE COMMITTEE	69 - 77	18
	A. Budget, staffing and location of the ad hoc secretariat	69 - 73	18
	B. Dates and venues of the next sessions	74 - 76	19
	C. Circulation of informal papers	77	19
V.	ADOPTION OF THE REPORT	78 - 79	20
VI.	CLOSURE OF THE SESSION	80 - 83	20

Annexes

I.	Documents before the Committee at its first session	21
II.	Decisions of the Committee	23

I. Establishment of subsidiary organs and organization of work

34. At the 10th plenary meeting, on 14 February, Mr. Raúl Estrada-Oyuela (Argentina), Vice-Chairman of the Committee, reported on the consultations that had taken place in the informal contact group concerning subsidiary organs and introduced specific proposals on the subject (A/AC.237/L.3).

35. At the 11th plenary meeting, on 14 February, the Chairman stated that, after further consultations on these proposals, he was submitting a draft decision entitled "Establishment of subsidiary organs and organization of work" (A/AC.237/L.5). That draft decision superseded document A/AC.237/L.3.

36. The Committee then adopted the draft decision (see annex II, decision 1/1).

37. After the adoption of the draft decision, a statement was made by the representative of Ghana (on behalf of the States members of the Group of 77 and China).

38. At the same meeting, the Chairman also made a statement concerning the composition of the bureaux of the two Working Groups. He indicated that the election of the members of the bureaux would be postponed until the second session of the Committee.

39. A number of delegations expressed their willingness to show flexibility in solving the problem and to work further with the Chairman to that end.

III. SUBSTANTIVE MATTERS

A. General debate

40. Statements were made in the general debate by representatives of 68 Member States, as well as by representatives of a number of entities and organizations of the United Nations system, other intergovernmental organizations and non-governmental organizations.

41. Many countries stressed the importance of addressing the issue of global climate change in an integrated and comprehensive manner, taking into account all greenhouse gases, and their sources and sinks, and the need for phased and flexible long-term response strategies. Some of them also stressed that the efforts to address the global climate change issue should take full account of the special circumstances and needs of the developing countries and be based on the principle of common but differentiated responsibility. A common theme was the need to undertake at present actions that were also justified on other grounds, such as increasing energy efficiency and developing new, alternative and renewable sources of energy. In that context, it was stated that conservation measures should be adopted and implemented as soon as possible and that consumer patterns in developed countries should be changed. The capacity of forests and oceans as sinks and the problems of forest protection and afforestation were referred to as particularly important.

42. Many countries called for early finalization of the organizational part of the work of the Committee and for development of the first draft of the framework convention, which should be negotiated as soon as possible. They referred to the results of the work of the Intergovernmental Panel on Climate Change, to the Noordwijk, Hague, Cairo and other declarations and statements, and in particular the Ministerial Declaration of the Second World Climate Conference (A/45/696/Add.1, annex III); these should be taken into consideration in the development of the draft framework convention.

43. Most speakers referred to June 1992, the date of the United Nations Conference on Environment and Development, as the date for the framework convention on climate change to be ready for signature. Some countries expressed the view that the negotiating process should concentrate on drafting the provisions of the framework convention, having in mind that preparation of related legal instruments and protocols could start at a later stage, taking into account the results of the United Nations Conference on Environment and Development. However, several countries stressed the need for negotiations to proceed in parallel on the framework convention and on protocols.

44. It was stated by several countries that actions should be based on the precautionary principle and on the best available scientific knowledge; that scientific uncertainties could not excuse inaction on global climate change; and that waiting for scientific proof could involve putting at risk the common future of humankind and its very existence. All countries recognized the need for continued research to enhance understanding of global climate change and its effects on the environment and humankind. Most countries strongly supported further development of scientific co-operation, monitoring and information exchange on scientific aspects of global climate change, including physical, chemical and biological processes, as well as on the impact of global climate change on forests, oceans and biological diversity. Many countries also referred to the need for advice to be available from the Intergovernmental Panel on Climate Change during the negotiation process.

45. Some countries were of the view that the framework convention should contain general principles and general obligations, and that protocols, negotiated subsequently, could define commitments in a detailed and binding manner. Other countries emphasized that an effective framework convention on climate change should include firm commitments. Views expressed included the need to avoid arbitrary mechanical targets; to stabilize the emission of greenhouse gases by around the year 2000 at about 1990 levels; and to adopt targets for the reduction of emissions. Several countries advocated immediate and significant cuts in the emission of carbon dioxide and other greenhouse gases by industrialized countries. Several others emphasized that an effective framework convention on climate change should include specific commitments supplemented by protocols negotiated in parallel and urged all industrialized countries to undertake commitments to stabilize or reduce their carbon dioxide and other greenhouse gas emissions. Some of those proposed that stabilization by industrialized countries of carbon dioxide emissions should in general be achieved by the year 2000 at 1990 levels.

46. Many countries emphasized that an effective framework convention and any related legal instruments should be based on the principles of equity and common but differentiated responsibility, taking full account of the necessity for the energy consumption of developing countries to grow as their economies develop. A number of countries expressed the need for all countries to make commitments to address climate change. Many other countries referred to the need for specific commitments by developed countries to provide transfer of technology on a preferential and concessional basis, and new and additional financial resources to developing countries, to enable them to address global climate change.

47. Many countries emphasized the special vulnerability of low-lying areas and small island countries to the effects of climate change. Several countries emphasized that the physical and cultural survival of small island countries was threatened by global warming from both sea-level rise and coral bleaching; consequently, their particular needs should be recognized and provided for in the framework convention. It was acknowledged that the participation of those countries in the negotiating process should be assured.

48. Several countries emphasized the need for a particular understanding of the potentially dramatic impacts of climate change on arid and semi-arid areas.

49. Some countries pointed to the particular situation of States whose economies were in transition and noted that their obligations should be established in the light of those circumstances. Such obligations would aim, inter alia, at a more efficient use of energy.

50. Some countries referred to the "polluter pays" principle as a corner-stone of the framework convention. Some emphasized that the countries whose per capita greenhouse gas emissions were high, and which emitted the most greenhouse gases in total, should reduce their emissions and co-operate with developing countries by compensating them for incremental costs involved in addressing climate change. Co-operation among all countries, developed and developing, was considered to be essential in the global effort to respond to climate change.

51. Some countries emphasized the need for the framework convention to contain provisions on scientific and economic research and the exchange of information and data in order to enhance understanding of global climate change.

52. It was suggested that the principles established under the Montreal Protocol on Substances that Deplete the Ozone Layer could serve as signposts to the way ahead. The Global Environment Facility (World Bank/UNEP/UNDP) was referred to in that context, as was the need for universality of the financial mechanism and equitability of the process.

53. A number of countries stated that the model of the Vienna Convention for the Protection of the Ozone Layer would not go far enough as a basis for a framework convention on climate change. Others expressed a different view.

54. It was stated that the framework convention must provide the right incentives for the development of technology and take into account all economic aspects of implementing measures to combat climate change.

55. Some countries also mentioned the need to include within the framework convention procedures concerning the settlement of disputes, non-compliance and ongoing review and updating of the international response.

56. A strong sense of urgency in the development of an effective framework convention was thoroughly emphasized and the organizational pattern of negotiations was referred to by way of proposals for the establishment of working groups.

57. Many countries stressed the need to ensure the participation of developing countries, in particular that of the least developed among them and small island developing countries, in the negotiating process through provision of financial resources from the special voluntary fund established for that purpose by the General Assembly in paragraph 10 of its resolution 45/212. Several countries noted their commitments to contribute to the fund. Some countries also made commitments to contribute to the trust fund established by the Assembly in paragraph 20 of the resolution to support the negotiating process for a framework convention for the duration of the negotiations. It was noted that some countries were providing funds in a bilateral context.

58. Many countries emphasized the importance of technical co-operation in the fields of training, public awareness and information exchange relevant to the preparation and implementation of a framework convention and to the development of national policies in the field of climate change.

59. Most countries referred to their domestic policies and actions undertaken to mitigate climate change, develop new sources of energy and improve energy efficiency. Some countries mentioned their commitments to reduce considerably their emissions of greenhouse gases.

60. Some countries mentioned, in sorrow, the Gulf crisis and its effects.

B. Relations with the Intergovernmental Panel on Climate Change

61. The Chairman conducted informal consultations on the above subject and reported on them to the Committee. He stressed that the modalities of the relationship between the Committee and the Intergovernmental Panel on Climate Change were set out in paragraph 14 of General Assembly resolution 45/212. The purpose of raising the subject was to allow countries to express their views on possible contributions by the Panel to the work of the Committee. The Chairman summarized the views expressed on the work of the Panel as follows:

(a) Appreciation was expressed for the outstanding work of the Panel and for the statement made by its Chairman, Mr. B. Bolin. Most countries welcomed his suggestions on the continuation of the work of the Panel.

(b) All countries agreed that the Intergovernmental Panel on Climate Change was not a negotiating forum, that it could provide technical and scientific assistance to the Intergovernmental Negotiating Committee and that, since the Panel was an independent body and would continue its work as mandated by WMO and UNEP, it

was for the Committee to decide which specific questions should be put, through its Executive Secretary, to the Panel at different stages.

(c) The desirability of the Panel's continuing to seek and achieve the full participation of developing countries in all aspects of its activity was emphasized. Views were also expressed that the lack of rules of procedure and the proliferation of subsidiary groups made the process of work of the Panel an extremely difficult one in which to participate.

(d) Certain countries suggested that in all its future activities the Panel should encourage the widest possible participation of experts and of relevant international and other organizations.

(e) Many countries presented various proposals and specific topics for the work the Panel should cover in both the short and the long term; the short-term work would assist the Committee in its negotiations leading to the preparation of a draft framework convention by the time of the United Nations Conference on Environment and Development; some of the tasks initiated to that end might also need to be continued into the long term.

(f) It was understood that the Executive Secretary would co-operate closely with the Intergovernmental Panel on Climate Change to ensure that the Panel could respond to the needs and requests for objective scientific and technical advice made during the negotiating process.

C. Funds set up pursuant to General Assembly resolution 45/212

62. Many countries emphasized the need to ensure the participation in the negotiating process of developing countries, in particular the least developed among them and small island developing countries, through financial assistance from the special voluntary fund established for the purpose by the General Assembly in paragraph 10 of resolution 45/212. Statements were made by several countries and the representative of a regional economic integration organization concerning their intentions to contribute to the fund: by 13 February 1991 approximately $US 1.25 million had been pledged, as shown in table 1. Some other countries indicated that they were in the process of considering pledges. Nevertheless, countries were very aware that demands on the fund during the whole period of the negotiations would considerably exceed the total of pledges made to date.

Table 1. Pledged contributions to the special voluntary fund to support the participation of developing countries, as at 14 February 1991

Contributor	Amount
Canada	$Can 35 000 ($US 30 000)
Denmark	$US 100 000
European Community	ECU 100 000 - 150 000 a/
France	FF 400 000 ($US 80 000)
Germany	$US 200 000 (over 2 years)
Japan	$US 200 000 b/
Netherlands	$US 150 000
Norway	$US 50 000
Spain	$US 50 000
Sweden	SKr 500 000 ($US 85 000)
Switzerland	SwF 300 000 ($US 250 000)
United Kingdom of Great Britain and Northern Ireland	£ 30 000 ($US 60 000)
United States of America	$US 50 000
Total	$US 1 455 000

a/ Up to a maximum of $US 150,000.

b/ Announced on 14 February 1991; see para. 68.

63. Some countries stated that funds were being provided in bilateral contexts. One delegation stressed that the multilateral character of the special voluntary fund should be preserved.

64. Countries noted that reimbursement from the special voluntary fund for participation in the sessions of the Committee would be retroactive and so apply to the first session. Such reimbursement would cover subsistence (per diem) as well as travel costs. It was also noted that similar arrangements made in connection with participation in sessions of the Preparatory Committee for the United Nations Conference on Environment and Development were differentiated, providing for the payment of travel costs for one representative per developing country, on request, and of per diem to representatives of a limited category of developing countries, in that case the least developed countries.

65. One country indicated that it had made a commitment to contribute to the trust fund established by the General Assembly in paragraph 20 of its resolution 45/212, in order to support the negotiating process for the framework convention for the duration of the negotiations (see table 2).

Table 2. Pledged contributions to the trust fund for the negotiating process, as at 13 February 1991

Contributor	Amount
United Kingdom of Great Britain and Northern Ireland	£ 30 000 ($US 60 000)

66. At the 11th plenary meeting, on 14 February, the Chairman drew the attention of the Committee to a draft decision entitled "Use of the special voluntary fund to support the participation of developing countries in the work of the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change", submitted by him (A/AC.237/L.4).

67. The Committee then adopted the draft decision (see annex II, decision 1/2).

68. Following the adoption of the decision, the representative of Japan made a statement in which he announced that his country would make a contribution of $US 200,000 to the special voluntary fund.

IV. ARRANGEMENTS FOR FUTURE SESSIONS OF THE COMMITTEE

A. Budget, staffing and location of the ad hoc secretariat

69. At the 11th plenary meeting, on 14 February 1991, the Executive Secretary made a statement on the funding of the negotiating process, including the operating budget of the secretariat, and indicated that the adequacy of estimates made for staff and conference-servicing costs, as well as the source of funding for other costs, would have to be examined in the light of the work plan emerging from the session. He recalled that, in adopting the resolution that established the Committee and its secretariat, the General Assembly had received a statement indicating that no additional appropriations would be required in respect of the programme budget for the biennium 1990-1991.

70. Provision would have to be made for general operating costs, travel, consultants and documentation. Costs might also be incurred for activities aimed at raising awareness of the issues under negotiation, particularly in developing countries. Those could include public information work and dialogue with non-governmental organizations.

71. Once the overall cost of the negotiating process had been estimated, it was his intention, in consultation with the Chairman, to present such estimates to the Committee in advance of its next session. That would enable Governments to assess the need for contributions to the trust fund and to respond to it, also in advance of the session.

ANNEX I

Documents before the Committee at its first session

1. The following documents were made available to the Committee:

(a) General Assembly resolution 44/207 of 22 December 1989, on the preparations for the negotiation of the framework convention on climate change

(b) General Assembly resolution 44/228 of 22 December 1989, on the convening of the United Nations Conference on Environment and Development

(c)	A/45/696 and Add.1	Report of the Secretary-General on progress achieved in the implementation of resolution 44/207 on protection of global climate for present and future generations of mankind

(d) General Assembly resolution 45/212 of 21 December 1990, entitled "Protection of global climate for present and future generations of mankind"

(e)	A/AC.237/1	Provisional agenda
(f)	A/AC.237/1/Add.1	Annotated provisional agenda
(g)	A/AC.237/2 and Corr.1	Note by the Secretariat on the rules of procedure
(h)	A/AC.237/3	Tentative schedule of meetings
(i)	A/AC.237/4	Documents relating to the meeting
(j)	A/AC.237/5	Rules of procedure
(k)	A/AC.237/L.1 and Corr.2, Add.1 and Add.1/Corr.1, and Add.2-4	Draft report
(l)	A/AC.237/L.2	Proposal concerning the rules of procedure submitted by the Vice-Chairman
(m)	A/AC.237/L.3	Proposal concerning subsidiary organs submitted by the Vice-Chairman

(n)	A/AC.237/L.4	Draft decision submitted by the Chairman, entitled "Use of the special voluntary fund to support the participation of developing countries in the work of the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change"
(o)	A/AC.237/L.5	Draft decision submitted by the Chairman, entitled "Establishment of subsidiary organs and organization of work"
(p)	A/AC.237/INF.1 and Corr.1	List of participants
(q)	A/AC.237/INF.2	Note by the secretariat on temporary secretariat arrangements

2. The following documents were also at the disposal of delegates:

(a) First Assessment Report of the Intergovernmental Panel on Climate Change (including its paper on legal measures)

(b) Report of the Ad Hoc Working Group of Government Representatives to Prepare for Negotiations on a Framework Convention on Climate Change on its meeting held at Geneva from 24 to 26 September 1990

3. The following documents were available for consultation at the meeting:

(a)	A/44/48	Report of the Preparatory Committee for the United Nations Conference on Environment and Development on the work of its organizational session (5-16 March 1990)
(b)	A/45/25	Report of the Governing Council of the United Nations Environment Programme on the work of its second special session (1-3 August 1990)
(c)	A/45/46	Report of the Preparatory Committee for the United Nations Conference on Environment and Development on the work of its first substantive session (6-31 August 1990)

ANNEX II

Decisions of the Committee

1/1. Establishment of subsidiary organs and organization of work

The Intergovernmental Negotiating Committee for a Framework Convention on Climate Change

1. Decides to establish two Working Groups to assist the Committee in carrying out its work;

2. Adopts the guidelines for the negotiations, organization of Working Groups and procedural points contained in the annex to the present decision.

ANNEX

I. GUIDELINES FOR THE NEGOTIATIONS

1. All items in the negotiations should be dealt with in an integrated manner and on the basis of General Assembly resolution 45/212 of 21 December 1990, which, inter alia, reaffirms the principles embodied in General Assembly resolutions 44/207 and 44/228, both of 22 December 1989.

2. The work of the groups must be interrelated and will be integrated by the plenary. To this end the two Working Groups will report regularly to the plenary.

3. Funding commitments, mechanisms and means for transfer of technology to developing countries, as well as matters concerning international scientific and technological co-operation, should be an integral element in the negotiations.

4. The final agreement on the convention should cover in an integrated manner all areas of common concern, including, inter alia: (a) emissions; (b) sinks; (c) transfer of technology; (d) financial resources and funding mechanisms for developing countries; (e) international scientific and technological co-operation; and (f) measures to counter the effects of climate change and its possible adverse impact, particularly on small island developing countries, low-lying coastal, arid and semi-arid areas, tropical regions liable to seasonal flooding and areas prone to drought and desertification.

II. ORGANIZATION OF WORKING GROUPS

5. The Working Groups will prepare draft texts for consideration by the plenary.

A. Working Group I: Commitments

6. Working Group I will prepare a text related to:

(a) Appropriate commitments, beyond those required by existing agreements, for limiting and reducing net emissions of carbon dioxide and other greenhouse gases, on the protection, enhancement and increase of sinks and reservoirs, and in support of measures to counter the adverse effects of climate change, taking into account that contributions should be equitably differentiated according to countries' responsibilities and their level of development;

(b) Appropriate commitments on adequate and additional financial resources to enable developing countries to meet incremental costs required to fulfil the commitments referred to above and to facilitate the transfer of technology expeditiously on a fair and most favourable basis;

(c) Commitments addressing the special situation of developing countries, taking into account their development needs, including, inter alia, the problems of small island developing countries, low-lying coastal areas and areas threatened by erosion, flooding, desertification and high urban atmospheric pollution; also taking into account the problems of economies in transition.

B. Working Group II: Mechanisms

7. Working Group II will prepare a text related to:

(a) Legal and institutional mechanisms, including, inter alia, entry into force, withdrawal, compliance and assessment and review;

(b) Legal and institutional mechanisms related to scientific co-operation, monitoring and information;

(c) Legal and institutional mechanisms related to adequate and additional financial resources and technological needs and co-operation, and technology transfer to developing countries corresponding to the commitments agreed to in Working Group I.

III. PROCEDURAL POINTS

8. There will be no more than two meetings held at any one time within the Intergovernmental Negotiating Committee.

9. There will be no inter-sessional meetings of the Intergovernmental Negotiating Committee Working Groups or any subgroups.

10. All drafting is to be done by each Working Group, within the framework of its mandate, subject to any subsequent need for harmonization.

11. If and when it is deemed necessary, the Working Groups, subject to the approval of the Intergovernmental Negotiating Committee, may establish ad hoc subgroups to deal with specific issues, with due respect to the understanding that no more than two meetings may be held at any one time. These groups would be reviewed continually to allow reformulation and adjustment in order to reflect the progress of the negotiations.

1/2. Use of the special voluntary fund to support the participation of developing countries in the work of the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change

The Intergovernmental Negotiating Committee for a Framework Convention on Climate Change

1. Welcomes the expressed intention of several Governments and a regional integration organization to contribute to the special voluntary fund established by the General Assembly in paragraph 10 of its resolution 45/212 of 21 December 1990;

2. Urges Governments that are in a position to do so but have not yet done so to contribute to the special voluntary fund according to their possibilities at an early date and expresses the hope that those which have already done so will make further contributions;

3. Urges relevant bodies of the United Nations system, in particular the United Nations Development Programme, the United Nations Environment Programme and the World Meteorological Organization, to contribute generously to the special voluntary fund and invites the Chairman of the Committee to convey this appeal to the executive heads of those bodies, as well as to those of other interested organizations;

4. Requests the Executive Secretary of the Committee, in determining the eligibility of countries for access to the fund, to bear in mind the following considerations in addition to the criteria set out in paragraph 10 of resolution 45/212:

(a) The vulnerability of countries to the rise in sea-level, drought and desertification, and severe weather disturbances;

(b) The importance of financing the attendance of experts, including scientists, as members of delegations from developing countries;

(c) Adequate regional representation of developing countries;

(d) The important role of regional organizations in providing suitable technical support to the effective participation of developing countries in the negotiating process;

5. Invites donors and recipients of financial assistance to keep the Executive Secretary informed of their relevant funding arrangements, so that the special voluntary fund may be used to the greatest effect;

6. Requests the Executive Secretary to facilitate the full and effective participation in the work of the Committee of developing countries, and indeed of all countries entitled to participate, by ensuring the timely and well-directed distribution of notifications, documentation and other information well in advance of Committee sessions, and by making adequate provision for this purpose within the capacities of the secretariat.

1/3. Expression of thanks to the Government and people of the United States of America

The Intergovernmental Negotiating Committee for a Framework Convention on Climate Change,

Having met at Washington, D.C., from 4 to 14 February 1991 at the invitation of the Government of the United States of America,

Expresses its profound gratitude to the Government and people of the United States of America for their warm and generous hospitality and for the excellent facilities provided during the first session of the Intergovernmental Negotiating Committee.

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13 August 1991
ORIGINAL: ENGLISH

INTERGOVERNMENTAL NEGOTIATING COMMITTEE
FOR A FRAMEWORK CONVENTION ON CLIMATE CHANGE
Third session
Nairobi, 9-20 September 1991
Item 2(a) of the provisional agenda

COMPILATION OF TEXTS RELATED TO PRINCIPLES

Submitted by the Bureau of Working Group I

Explanatory Note

This compilation is based on texts contained in A/AC.237/Misc.5/Add.3 and others submitted by delegations in Working Group I during the second session of the Committee.

The principles have been arranged under five main headings. Each heading has a number of subgroups. This has been done to facilitate reference. No special significance should be attached to the order in which the main headings, subheadings and the texts have been arranged.

A/AC.237/Misc.6

GE.91-62254

I. COMMON CONCERN, EQUITY, RESPONSIBILITY, SOVEREIGNTY

I.A. Common concern of mankind

1. Climate change is a common concern of mankind.

2. Global climate change is a matter of common concern for mankind.

3. Recognizing climate change as a common concern of mankind, we commit ourselves and intend to take active and constructive steps in a global response, without prejudice to sovereignty of States.

4. The Framework Convention on Climate Change should be global, acknowledging that climate change is a common concern of the international community and that all nations need to participate in any international response, in accordance with the means at their disposal and their capabilities.

5. All inhabitants of the planet have equal rights to the oceanic and other global sinks and to atmospheric resources, subject to provisions of international law.

6. Climate change is a common concern of mankind, and countries have common but differentiated responsibilities in addressing the Climate Change issue.

I.B. Inter-Generational Equity

1. Inter-Generational Equity: the duty of all States to preserve and protect natural capital for the benefit of present and future generations.

I.C. Equity

1. Equitability in all relevant commitments.

2. Equity both between industrialized countries and between industrialized countries and developing countries.

3. The need for equitable burden-sharing, both between industrialized and developing countries and between the industrialized countries, must be secured.

4. Equitable sharing between countries or major regions of the objectives established.

5. The obligations shall be equitably distributed between developed and developing countries in accordance with their responsibility and capabilities, and different time frames be set out for implementation, noting that the largest part of the current emission of greenhouse gases originates in developed countries and that those countries have the main responsibility for combating the adverse effects thereof.

6. Action to be taken should be based on equity, in accordance with the proportionate contributions to the problem, with due regard to the development requirements of developing countries, especially those whose current emissions are low.

7. In order to secure global undertakings relating to a climate change, the convention should have such contents that will lead to feasible and suitable actions by respective countries, with due consideration given to the various situations within individual nations. This notion follows as well that to enhance the response capability of developing countries, the convention should provide for special assistance to developing countries.

8. Equity, both among industrialized countries and between industrialized and developing countries. Although we have a common responsibility, we must recognize that it is differentiated in accordance with the level of development.

I.D. Polluter Pays Principle

1. The Polluter Pays Principle: the principle that those responsible for causing damage to the environment bear the responsibility for rectifying that damage.

2. Polluter Pays Principle should apply to global environment and compensate environmental damage suffered by countries.

I.E. Common but differentiated responsibility/Main responsibility

1. Global obligation to protect the climate for the benefit of future generations based on principle of equity and common but differentiated responsibilities of countries.

2. Differentiated time frames for the stabilization of greenhouse gases should be set up in accordance with different levels of emissions and providing a transitional period for developing countries.

3. We stress as a first step, the need to stabilize, while ensuring sustainable development of the world economy, emissions of greenhouse gases not controlled by the Montreal Protocol on Substances that Deplete the Ozone Layer. Contributions should be equitably differentiated according to countries' responsibilities and their level of development. In this context, we acknowledge efforts already undertaken by a number of countries to meet this goal.

4. Responsibility and preponderant role of the industrialized countries.

5. Common responsibility, although differentiated, requires action in these different areas. From the industrialized world it requires an effective cooperation which compensates for some of the restrictions that impede economic growth of the developing countries and a transfer of clean technology on concessionary terms that could allow "the leap forward" of those States that are going through the type of industrialization that has already affected the climate structure at a global level.

6. The obligation for taking or facilitating abatement and adaptation , measures rests on countries which are responsible for excessively high levels of per capita GHG emissions of an anthropogenic nature, past and present.

7. Developed countries are the main contributors of GHGs and thus should take the lead and shoulder the main responsibility to stabilize and limit the greenhouse gas emissions.

8. The international community has a common but differentiated responsibility in respect of climate change and, bearing in mind that the emission of greenhouse gases affecting the atmosphere has hitherto originated mainly from developed countries, those countries should therefore have the main responsibility in addressing the problem.

I.F. Liability and compensation

1. Developing countries require to be compensated for the full incremental costs incurred by them in respect of such measures that they may undertake with regard to climate change.

2. This Convention shall be without prejudice to the application of the rules of international law governing the liability of States.

I.G. Sovereignty

1. Sovereign right of each country to exploit its natural resources.

2. The principles enshrined in the Stockholm Declaration on Human Environment of 1972, particularly Principle 21 which provides that "States have, in accordance with the Charter of the United Nations and the Principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction" shall be adhered to.

3. The principles of sovereignty of States and of non-interference in the internal affairs of other countries shall be adhered to in all international affairs, including those relating to the protection of global environment.

4. The Framework Convention on Climate Change should respect national autonomy in accordance with Principle 21 of the Stockholm Declaration, recognizing that nations have different social, economic and other circumstances, including different sets of net greenhouse gas emissions, and need flexibility in the choice of any response options.

5. Sovereign exploitation of forests (tropical and temperate) is also a prerequisite for the [solidarity] action of States in order to halt a phenomenon that will affect the lives of future generations.

II. GENERAL APPROACHES

II.A. The Principle of Inter-connectedness

1. The Principle of Inter-connectedness: the principle that all elements of the ecosystem are linked, interrelated and interdependent, so that actions in one area influence and have effects upon other areas.

2. In respect to the world community's effort to protect the atmosphere and climate change, we would like to stress the adoption of a balanced and parallel method in dealing with the different aspects of concluding an international convention to control GHG through a global approach, which would take into consideration all GHGs and activities that lead to these phenomena. In so doing, we should be careful that the solutions we are adopting do not encourage new ecological, economic or social problems, which would place increased burdens on LDCs.

II.B. Comprehensiveness

1. The control of GHG emissions should not be limited to the gas and energy sector alone, there should be equivalent and parallel consideration of other GHGs, specifically methane and NOx, and of other industrial sectors, agriculture, and domestic activities (for example, solid waste disposal methods).

2. The Framework Convention on Climate Change should be comprehensive, recognizing that several greenhouse gases, each with different impacts on the environment, arise from numerous human activities and natural processes worldwide; and that strategies to understand and address climate change will be most environmentally effective and economical if they encompass all the greenhouse gases, their sources and sinks.

3. We recommend that in the elaboration of response strategies, over time, all greenhouse gases, sources and sinks be considered in the most comprehensive manner possible and also that limitation and adaptation measures be addressed.

4. Account should be taken of all sources and sinks of GHGs and our commitments should relate to control of net emissions.

5. Climate policies should include all relevant sources and sinks of greenhouse gases. Emission targets should be defined in terms of net emissions of the greenhouse gases that are adequately measurable, measured as CO2-equivalents, taking into account requirements under the Montreal Protocol and other agreements.

II.C. Precautionary principle

1. Use of the principle of precautionary action to confront the factors that caused climate change.

2. In order to achieve sustainable development in all countries and to meet the needs of present and future generations, precautionary measures to meet the climate challenge must anticipate, prevent, attack or minimize the causes of, and mitigate the adverse consequences of, environmental degradation that might result from climate change. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent such environmental degradation. The measures adopted should take into account different socio-economic contexts.

3. We recommend that appropriate precautionary and control measures be developed and implemented at regional, subregional and country levels as appropriate to counter the increasing degradation of land, water, and genetic and other productive resource bases by drought, desertification and land degradation.

4. The Framework Convention on Climate Change should take a precautionary approach, reaffirming that lack of full scientific certainty should not be used as a reason for postponing measures that are commensurate with the expected extent and likelihood of any adverse impact on climate change, that reflect the cost and benefits of such measures, and that are directed as appropriate towards understanding, limiting, reducing, adapting to or preventing such adverse impacts.

5. The Precautionary Principle: the principle which operates where there is sufficient evidence to identify a threat of serious or irreversible harm to the environment to establish a duty to take measures which anticipate, prevent and attack the causes of environmental degradation prior to conclusive scientific proof that the threat will or does harm the environment.

6. The need to take, in the light of the best available scientific knowledge on climate change, realistic and feasible measures which are beneficial to the environment without prejudicing opportunities for economic development, and stressing that measures which are likely to have negative impacts upon or to cause damage to economic and other social activities of mankind should of necessity be taken on a sound and scientific basis.

7. High priority must be given to solving the remaining major uncertainties regarding causes and effects of climate change, including the risk for non-linear and rapid changes, as well as uncertainties regarding economic projections and cost estimates.

II.D. Flexibility

1. In accordance with SWCC, actions should be undertaken in a phased and flexible manner on the basis of medium and long term strategies at national, regional or global level.

2. The Framework Convention on Climate Change should be flexible, recognizing that strategies to understand and address climate change will be most environmentally effective and most economical if they are based on, and continually reevaluated in light of, relevant scientific, technical, and economic considerations.

II.E. Cost-effectiveness

1. The first principle is cost-effectiveness. It is of paramount importance that measures taken by individual countries are effective in a global perspective. Only by making sure that priority is given to those measures which contribute most to reducing greenhouse gases in the atmosphere can we hope to achieve ambitious global environmental targets, while ensuring sustainable development of the world economy as recognized by the Second World Climate Conference. This can be obtained by giving countries the opportunity to meet emission commitments nationally or partly in cooperation with other countries, either on a bilateral basis or with the assistance of a multilateral institution.

2. The Framework Convention on Climate Change should encourage nations to use market mechanisms, as appropriate, to foster expanding free trade and to achieve cost-effective results.

3. A balance must be struck between potential ecological and socio-economic consequences of climate change, the cost of abatement policies and the cost of adaptation. Climate policies must be combined with policies to foster vigorous economic growth to combat poverty, safeguard the development priorities of developing countries and create the necessary resources to combat local and regional environmental degradation.

II.F. Recognition of other measures

1. The Framework Convention on Climate Change should recognize and encourage other measures that may be taken, are being taken or have already been taken at the national, regional and international levels that help address the issue of climate change.

II.G. Open Process

1. The Framework Convention on Climate Change should foster in an open process, allowing appropriate input from non-governmental organizations, public access to decision-making deliberations where appropriate, and outreach and education of the interested global citizenry.

III. DEVELOPMENT

III.A. Sustainable Development/Environment and Development

1. Necessity of assuring compatibility of protection of environment and economic development.

2. Climate change is the most global of all environmental problems which calls for the widest possible association of efforts by all countries including a dramatic change in production and consumption patterns in industrialized countries, as well as differentiated agreement for effective action.

3. Integration of climate change issues with development.

4. Environmental protection and economic development shall proceed in an integrated manner in light of country-specific conditions.

5. In developing countries whose energy costs and emissions are unimportant in the overall context an efficient use of energy should be favoured, but for the time being, because of demography and increasing levels of economic growth, an absolute increment in the use of energy is to be expected.

6. There should be different targets with different time-frames for different categories of countries so that the right to development of developing countries is taken into account. Countries with low energy consumption can set appropriate targets by, inter alia, taking advantage of more energy efficient and less pollutive technologies.

7. The Framework Convention on Climate Change should reflect the long term nature of climate change, building the knowledge, technology and resources needed to achieve sustainable development.

8. A long-term objective of climate policies should be to take appropriate action to stabilize greenhouse gas concentrations in the atmosphere at a level which minimizes damage to the sustainable development of societies and to ecosystems, ecological processes, and climatic conditions essential for the functioning of the biosphere.

9. Notwithstanding the commitments agreed upon in this Convention, all countries, particularly developing countries and countries with economies in transition, in exercizing their right to choose the best path to ensure their sustainable development and to reach an appropriate standard of living, shall be entitled to choose the forms of energy which suit better their growth need, specially those energy resources which are characterized by security of access, abundancy and low-cost.

10. Recognizing that climate change is a global problem of unique character and taking into account the remaining uncertainties in the field of science, economics and response options, we consider that a global response, while ensuring sustainable development 1/ of all countries, must be decided and

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1/ (Statement of sustainable development as agreed at the fifteenth session of UNEP Governing Council (annex II, UNEP/GC 15/L.37).

implemented without further delay based on the best available knowledge such as that resulting from the IPCC assessment. Recognizing further that the principle of equity and the common but differentiated responsibility of countries should be the basis of any global response to climate change, developed countries must take the lead. They must all commit themselves to actions to reduce their major contribution to the global net emissions and enter into and strengthen cooperation with developing countries to enable them to adequately address climate change without hindering their national development goals and objectives. Developing countries must, within the limits feasible, and taking into account the problems regarding the burden of external debt and their economic circumstances, commit themselves to appropriate action in this regard. To this end, there is a need to meet the requirements of developing countries, that adequate and additional financial resources be mobilized and the best available environmentally-sound technologies be transferred expeditiously on a fair and most favourable basis.

11. Special consideration for the developing countries to meet their socio-economic development including supportive international environment.

III.B. Living Standards and Right to Development

1. Since developing countries have as their main priority the eradication of poverty and achieving social and economic development, their net emissions must grow from their as yet relatively low energy consumption.

2. An appropriate level of economic development is the prerequisite for adopting concrete control measures to address climate change, and all the peoples in the world are entitled to an appropriate standard of living. Therefore, the energy consumption of developing countries must grow. Any limitation or control measures shall take full account of the per capita emission levels of various countries and the developmental needs of developing countries.

3. The Right to development is an inalienable human right. All peoples have an equal right in matters relating to living standards.

4. We recognize that developing countries have as their main priority alleviating poverty and achieving social and economic development and that their net emissions must grow from their, as yet, relatively low energy consumption to accommodate their development needs. Narrowing the gap between the developed and the developing world would provide a basis for a full partnership of all nations and would assist the developing countries in dealing with the climate change issue.

III.C. Special Circumstances

1. The special circumstances and needs of the parties that are developing countries shall be taken into full consideration, and the Parties shall exert all efforts to ensure that the developing countries are provided with the necessary financial resources and the requisite technologies and means in order to adequately address the problem of climate change.

2. Principles; e.g., recognition of the different circumstances of countries, including the particular circumstances of developing countries and countries with economies in transition.

3. The specific difficulties of those countries, particularly developing countries, whose economies are highly dependent on fossil fuel production and exportation, as a consequence of action taken on limiting greenhouse gas emissions, should be taken into account.

4. All Parties shall give special consideration, including the adoption of appropriate measures, to the situation of developing countries, whose economies are highly dependent on fossil fuels, either because they are not in a position to use substitutes for such fuels or do not possess the flexibility to switch to non-fossil fuels, or because of their dependency upon the production and exportation of fossil fuels.

5. The particular vulnerability of the Least Developed Countries to the impact and/or potential threats of global climate change needs to be addressed on a priority basis.

6. We recommend that similar measures be adopted to address the particular problems and needs, including funding, of low lying coastal and small vulnerable island countries, some of whose very existence is placed at risk by the consequences of climate change.

IV. COOPERATION

IV.A. International Cooperation

1. The necessary participation of all countries from the very beginning.

2. The Framework Convention on Climate Change should foster international cooperation, enabling cooperative arrangements for understanding and addressing protential climate change in the most effective and efficient manner.

3. The Framework Convention on Climate Change should foster global stewardship, recognizing the interdependence of environmental protection and economic growth, and the need to pursue strategies that advance both goals if we are to protect global resources for present and future generations.

4. Narrowing the gap between the developed and the developing world would be the basis for a full partnership of all nations and would assist the developing countries in dealing with the climate change issue.

5. The whole world needs to launch a cooperative effort, as the atmosphere knows no boundaries. Furthermore, those who will be most hit by the effects of global warming are not necessarily those who historically have contributed most to the emission of greenhouse gases. We also know that economic development will change the emission patterns over time.

6. The Parties shall conduct effective international cooperation based on the principle of equity to deal jointly with the climate change issue without prejudice to sovereignty of states.

7. The greatest possible harmonization of the measures adopted in order to avoid distortions of competition.

IV.B. Research, information and training

1. Relevant Scientific, Technical and Economic Considerations: Implementation of this Convention shall be based on relevant scientific and technical considerations. Action shall be taken by the parties in accordance with the means at their disposal and their capabilities.

2. Research, systematic observation and monitoring.

3. It is necessary to implement practicable response strategies without delay, while improving our scientific knowledge; it is also necessary that our response strategies should constantly be reviewed, taking advantage of scientific and technological developments and knowledge.

4. The Framework Convention on Climate Change should promote sound science and economics, encouraging appropriate bodies to undertake vigorous research, systematic observation and analysis, including full and open exchange of data among parties and cooperation among all nations.

5. Observatories on climate and climate change and observatories on ecosystems should be encouraged to work together on drought risks consequences. Studies must be undertaken on drought and desertification. We stress that stepped-up financial and scientific contribution be provided to facilitate these efforts.

6. Existing standard methodologies of assessing the emissions of GHGs should be made available to all countries so that they can undertake assessment of their own emissions.

7. We recommend further that resources be assessed. Such assessments, to be conducted as soon as possible, should include country studies and mechanisms to meet the financing needs identified, taking note of the approaches developed under the Montreal Protocol.

V. TRANSFERS

V.A. New and additional funding

1. Obligations of developed countries to provide new and additional funding and to cover incremental cost which will be incurred by developing countries in addressing climate change issues.

2. Transfer of additional financial resources to favour developing countries considering the serious situation caused by the external debt of the majority of these countries.

3. The principle of additionality of resources is closely linked to equity. We must draw the practical consequences of the fact that developing countries need to concentrate their scarce resources on economic and social development. Assistance to developing countries to cover incremental costs to combat global warming must therefore be additional to other financial transfers.

4. To enable developing countries to meet incremental costs required to take the necessary measures to address climate change and sea-level rise, consistent with their development needs, we recommend that adequate and additional financial resources should be mobilized and best available environmentally sound technologies transferred expeditiously on a fair and most favourable basis. Developing countries also should, within the limits feasible, take action in this regard.

5. We recommend that consideration should be given to the need for funding facilities, including the proposed World Bank/UNEP/UNDP Global Environmental Facility, a clearing-house mechanism and a new possible international fund composed of adequate additional and timely financial resources and institutional arrangements for developing countries taking into account existing multilateral and bilateral mechanisms and approaches. Such funding should be related to the implementation of the framework convention on climate change and any other related instruments that might be agreed upon.

V.B. Development and Transfer of Technology

1. Negotiations on transfer of financial resources and technology should take place at the same time as on other aspects of the Convention.

2. Obligation of developed countries to effect transfer of appropriate environmentally sound technologies on a concessional and preferential basis.

3. Preferential technology transfer for developing countries.

4. Developing countries will also require technology transfers on preferential and non-commercial terms.

5. We recognize that there is no single quick-fix technological option for limiting greenhouse gas emissions. However, we are convinced that technological innovation as well as individual and social behaviour and institutional adaptations is a key element of a long-term strategy that deals with climate change in a way that meets the goal of sustainable development. Therefore, we urge all countries, the developed countries in particular, to intensify their efforts and international cooperation in technological research, development and dissemination of appropriate and environmentally sound technologies, including the reassessment and improvement of existing technologies and introduction of new technologies.

6. The Framework Convention on Climate Change should spur needed technologies through technology cooperation and appropriate incentives for their development and dissemination, including adequate and effective protection of intellectual property rights.

7. We urge that environmentally sound and safe technologies be utilized by all sectors in all countries to the fullest extend possible and further urge all countries, developed and developing, to identify and take effective measures to remove barriers to the dissemination of such technologies. To this end, the best available environmentally sound and safe technologies should be transferred to developing countries expeditiously on a fair and most favourable basis.

8. Transfer of environmentally sound technologies shall not be restricted on political grounds.

9. Consideration of the specific needs of the developing countries both as regards the adoption of commitments and the financing and transfer of technology.

10. It is also essential to work with equal zeal in enhancing existing sinks and the creation of new ones. This means working actively on protecting forests and wet areas, as well as development and transfer of technology related to salt-tolerant plants in arid and semi-arid areas. The transfer of technology should also include increasing combustion efficiency to reduce NOx, and the development of agricultural and solid waste disposal techniques that generate less GHG.

11. Principle of Social Responsibility relating to Transfer of Technology: This principle mandated that no developed country shall aid or encourage the transfer of technologies that embody human and environmental safety risks. Developed countries are required to inform developing countries of all short and long term safety risks and cost of any technology that might be sought notwithstanding that such technologies may not be viewed as major source of Greenhouse Gases.

12. Clean production.

V.C. Non-conditionality

1. Non-conditionality such as barriers to trade.

2. No environmental conditionalities shall be introduced in aid or development financing.

3. Developed countries are urged to cooperate with developing countries to support immediate action in addressing climate change including sea-level rise without imposing any new conditionality on developing countries.

4. No country or group of countries shall introduce barriers to trade on environmental grounds, except on the basis of a decision by the Conference of Parties.

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INTERGOVERNMENTAL NEGOTIATING COMMITTEE
FOR A FRAMEWORK CONVENTION ON CLIMATE CHANGE
Second session
Geneva, 19-28 June 1991

REPORT OF THE INTERGOVERNMENTAL NEGOTIATING COMMITTEE FOR A FRAMEWORK CONVENTION ON CLIMATE CHANGE ON THE WORK OF ITS SECOND SESSION, HELD AT GENEVA FROM 19 TO 28 JUNE 1991

CONTENTS

		Paragraphs	Page
I.	INTRODUCTION	1	3
II.	ORGANIZATIONAL MATTERS	2 - 15	3
A.	Opening of the session	2	3
B.	Attendance	3 - 8	4
C.	Adoption of the agenda	9	5
D.	Documentation	10	6
E.	Election of officers	11 - 13	6
F.	Organization of work	14 - 15	7

/...

		Paragraphs	Page
III.	PREPARATION OF A FRAMEWORK CONVENTION ON CLIMATE CHANGE	16 - 68	7
	A. Statements by representatives of the programmes and organizations of the United Nations system	16 - 20	7
	B. Statements by delegations	21 - 23	8
	C. Report on Working Group I: Commitments	24 - 34	9
	D. Report on Working Group II: Mechanisms	35 - 43	10
	E. Consideration of progress reports on the work of the Working Groups	44 - 68	12
IV.	REQUESTS FOR SCIENTIFIC AND TECHNICAL ADVICE FROM THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE	69 - 72	19
	A. Statement by the Chairman of the Intergovernmental Panel on Climate Change	69 - 70	19
	B. Statements by delegations	71 - 72	19
V.	REVIEW OF EXTRABUDGETARY FUNDS	73 - 80	20
	A. Special voluntary fund to support the participation of developing countries	73 - 76	20
	B. Trust fund for the negotiating process	77 - 80	21
VI.	ARRANGEMENTS FOR FUTURE SESSIONS OF THE COMMITTEE	81 - 83	22
	A. Provisional agenda for the third session	81	22
	B. Dates and venues of future sessions	82 - 83	23
VII.	ADOPTION OF THE REPORT	84 - 87	23
VIII.	CLOSURE OF THE SESSION	88	23
	Annex: List of documents before the Committee at its second session		24

12. The Chairman stressed that, notwithstanding any precedents in the United Nations for such a device, the election of Co-Chairmen was, in the view of all, an exceptional measure. He stated further that it did not imply any departure from an integrated approach to the subject-matter dealt with by the Working Groups and that it would be his responsibility as Chairman of the Committee to ensure the harmonious functioning of the arrangement.

13. On the proposal of the Chairman, the Committee waived rules 50 and 40 of its rules of procedure to permit the Committee to elect officers of the Working Groups. The Committee then elected the following officers of Working Group I:

Co-Chairmen: Mr. N. Akao (Japan)
Mr. E. de Alba-Alcaraz (Mexico)
Vice-Chairman: Mr. M.M. Ould El Ghaouth (Mauritania)

and of Working Group II:

Co-Chairmen: Ms. E. Dowdeswell (Canada)
Mr. R.F. Van Lierop (Vanuatu)
Vice-Chairman: Mr. M. Sadowski (Poland)

F. Organization of work

14. The Chairman noted that the tasks of the Working Groups should be organized according to Committee decision 1/1 (A/AC.237/6, annex, part II, paras. 6 and 7).

15. At its 5th plenary meeting, on 24 June, on the proposal of the Chairman, the Committee agreed that work on principles and definitions would be addressed by the two Working Groups, as necessary, but that the bulk of the consideration of these aspects of the framework convention was expected to take place in Working Group I. There was also an understanding that this was to be a first reading, which would not preclude the presentation of further proposals at a later stage.

III. PREPARATION OF A FRAMEWORK CONVENTION ON CLIMATE CHANGE

A. Statements by representatives of programmes and organizations of the United Nations system

16. At the 1st plenary meeting, on 19 June 1991, statements were made on behalf of the Executive Director of UNEP, the Secretary-General of UNCED and the Secretary-General of WMO. All three statements reviewed and reaffirmed the support of their respective organizations for the negotiating process in the Committee and for its secretariat and welcomed the good collaboration established with the latter.

17. In a statement read by Mr. William Mansfield III, Deputy Executive Director of UNEP, Dr. Mostafa K. Tolba, Executive Director of UNEP, emphasized the need for an effective convention with commitments, a need which was supported by increasing scientific evidence of global warming. Referring to the importance of providing assistance to developing countries, he stated that UNEP, in collaboration with the Intergovernmental Panel on Climate Change (IPCC), intended to support studies in a few countries to analyse the costs of responding to climate change.

18. Mr. Nitin Desai, Deputy Secretary-General of UNCED, speaking on behalf of the Secretary-General of UNCED, Mr. Maurice F. Strong, noted that the Preparatory Committee of UNCED sought to provide a framework for integrating distinct activities such as the negotiations on a climate change convention in a broad-based programme of action for sustainable development. The progress achieved in these negotiations would be an important factor in determining the outcome of the UNCED. Implementing that outcome would require new and additional financial resources, arrangements for the transfer of relevant technologies, particularly to developing countries, and legal and institutional development.

19. Dr. Victor Boldirev, Director of the World Climate Programme of WMO, made a statement on behalf of the Secretary-General of WMO, Professor G.O.P. Obasi. He outlined developments at the Eleventh World Meteorological Congress, held in May 1991, which adopted resolutions on matters fundamental to work on climate change, including the World Climate Programme (WCP), the Global Climate Observing System (GCOS), IPCC and INC itself. He described the implementation strategy of the World Climate Programme and the role of the Co-ordinating Committee.

20. The Chairman noted that the Committee would need to take into account the relevant decisions of the Preparatory Committee of UNCED, the Governing Council of UNEP and the Eleventh World Meteorological Congress.

B. Statements by delegations

21. At the 2nd plenary meeting, on 19 June, statements were made by the representatives of several countries relating to their submissions before the Committee, reproduced in documents A/AC.237/Misc.1 and Add.1 to 8.

22. At the 3rd and 4th plenary meetings, on 21 June, the representatives of some countries made statements commenting on document A/AC.237/Misc.2/Rev.1, entitled "Compilation of Possible Elements for a Framework Convention on Climate Change", prepared by the secretariat as an informal contribution to the Committee's work on agenda item 2. The Executive Secretary responded to those comments. At its 4th plenary meeting, the Committee agreed that the secretariat should prepare a further compilation 2/ comprising the texts submitted by delegations and contained in addenda 1-9 to document A/AC.237/Misc.1 and structured in accordance with paragraphs 6 and 7 of decision 1/1 of the Committee (A/AC.237/6).

2/ Later issued as A/AC.237/Misc. 5 and Add. 1-3

23. At the 6th plenary meeting, on 25 June, one representative referred to the Ministerial Conference of Developing Countries on Environment and Development, which was held in Beijing on 18 and 19 June 1991. He added that texts of the Beijing Ministerial Declaration on Environment and Development adopted at the Conference were available.

C. Report on Working Group I: Commitments

24. At its 4th plenary meeting, on 21 June 1991, the Intergovernmental Negotiating Committee, in accordance with its decision 1/1, allocated item 2(a) of its agenda, entitled "Preparation of a framework convention on climate change: (a) Elements related to commitments" to Working Group I. (See also para. 15 above).

25. At a private meeting, on 21 June, Working Group I, bearing in mind rule 46 of the rules of procedure, agreed that its meetings would be open unless it decided otherwise. Subsequently, Working Group I held eight open meetings from 24 to 27 June 1991.

26. At its 2nd meeting, on 24 June , Working Group I approved its programme of work for the session (A/AC.237/WG.I/L.1)

1. Principles

27. Working Group I considered this topic at its 2nd meeting, on 24 June. Statements were made by representatives of 40 States.

28. Working Group I agreed that, on the basis of the above discussion, proposals related to principles should be compiled under various headings.

29. At its 8th meeting, Working Group I had before it in document A/AC.237/WG.I/L.3 a draft proposal by the Bureau on a "Draft compilation of principles". Statements were made by representatives of 24 States.

2. Elements related to commitments

> "(a) Appropriate commitments, beyond those required by existing agreements, for limiting and reducing net emissions of carbon dioxide and other greenhouse gases, on the protection, enhancement and increase of sinks and reservoirs, and in support of measures to counter the adverse effects of climate change, taking into account that contributions should be equitably differentiated according to countries' responsibilities and their level of development" (Decision 1/1, annex, para. 6 (a)).

30. Working Group I considered matters under this heading at its 3rd and 4th meetings, on 25 June. Statements were made by representatives of 45 States and one observer.

"(b) Appropriate commitments on adequate and additional financial resources to enable developing countries to meet incremental costs required to fulfil the commitments referred to above and to facilitate the transfer of technology expeditiously on a fair and most favourable basis". (Decision 1/1, annex, para.6 (b)).

31. Working Group I considered matters under this heading at its 5th and 6th meetings, on 26 June. Statements were made by representatives of 40 States.

"(c) Commitments addressing the special situation of developing countries, taking into account their development needs, including inter alia, the problems of small island developing countries, low-lying coastal areas and areas threatened by erosion, flooding, desertification and high urban atmospheric pollution; also taking into account the problems of economies in transition" (Decision 1/1, annex, para. 6(c)).

32. Working Group I considered matters under this heading at its 6th meeting, on 26 June. Statements were made by representatives of eight States. Attention was drawn, inter alia, to the special problems of the least developed countries. Representatives of the United Nations Environment Programme and the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (UNESCO/IOC) also made statements.

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33. At its 7th meeting, on 27 June, Working Group I considered a possible structural organization of material relevant to paragraphs 6(a), (b) and (c) of the annex to decision 1/1 on the basis of a draft proposal by the Bureau (A.AC.237/WG.I/L.2). It was understood that this structure was for the purpose of compilation and was not related to the structure of the framework convention. Statements were made by representatives of 15 States.

34. Working Group I agreed that proposals related to commitments should be reflected in a new compilation to be prepared under the authority of the Co-Chairmen. This compilation should cover proposals contained in document A/AC.237/Misc.1 and Add.1 to 9, new proposals made during the proceedings of the Working Group and any further proposals that are communicated in writing to the INC secretariat at Geneva no later than 15 July 1991. It was left to the judgement of its Co-Chairmen to decide how they might further facilitate discussion at the third session of the Committee.

D. Report on Working Group II: Mechanisms

35. At its 4th plenary meeting, on 21 June 1991, the Intergovernmental Negotiating Committee in accordance with its decision 1/1, allocated item 2(b) of its agenda, entitled "Preparation of a framework convention on climate change: (b) Elements related to mechanisms" to Working Group II. (See also para. 15 above.)

36. At a private meeting, on 21 June, Working Group II, bearing in mind rule 46 of the rules of procedure, agreed that its meetings would be open unless it decided otherwise. Subsequently, Working Group II held six open meetings, from 24 to 27 June 1991.

37. At its first meeting, on 24 June, Working Group II approved its programme of work for the session (A/AC.237/WG.II/L.1).

"(a) Legal and institutional mechanisms, including, inter alia, entry into force, withdrawal, compliance and assessment and review" (Decision 1/1, annex, para. 7(a)).

38. Working Group II considered matters under this heading at its 3rd and 6th meetings, on 25 and 27 June. At the 3rd meeting, statements were made by representatives of 23 States.

"(b) Legal and institutional mechanisms related to scientific co-operation, monitoring and information" (Decision 1/1, annex, para. 7(b)).

39. Working Group II considered matters under this heading at its 1st, 2nd and 6th meetings, on 24 and 27 June. At its 1st meeting, on 24 June, Working Group II heard statements by representatives of 19 States. At its 2nd meeting, on 24 June, Working Group II heard statements by representatives of 12 States.

40. Working Group II held three informal meetings to consider various drafts and other proposals by delegations on these matters.

"(c) Legal and institutional mechanisms related to adequate and additional financial resources and technological needs and co-operation, and technology transfer to developing countries corresponding to the commitments agreed to in Working Group I." (Decision 1/1, annex, para. 7(c))

41. Working Group II considered matters under this heading at its 4th, 5th and 6th meetings, on 26 and 27 June. At the 4th meeting, on 26 June, statements were made by representatives of 20 States and the representative of a specialized agency. At the 5th meeting, on 26 June, statements were made by representatives of 20 States.

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42. At its 6th meeting, on 27 June, Working Group II decided to request its Co-Chairmen to present to the Plenary an oral report summarizing the views expressed in the Working Group on all the matters considered by it.

43. At the same meeting, on the basis of informal consultations, Working Group II decided to recommend to the Committee the adoption of the following draft decision:

The Committee decides to request the Co-Chairmen of Working Group II to prepare a single text on the elements relating to mechanisms under the mandate of Working Group II as follows:

(a) This text is to be based on the various submissions already before the Working Group and those which might be submitted by delegations to the INC secretariat in Geneva in writing on or before 15 July 1991, as well as on the discussions held by the Working Group during the second session of the Committee;

(b) This text is to include areas of convergence and, where necessary, to present alternative versions where there is no convergence.

(c) This text could serve as a possible basis for consideration and discussion by Working Group II at the third session of the Committee and is to be distributed well in advance of that session.

E. Consideration of progress reports on the work of the Working Groups

44. At the 8th plenary meeting, on 28 June 1991, the respective Co-Chairmen of Working Groups I and II presented oral reports to the Committee on the progress of work in each Working Group, giving their own impressions of convergences and divergences in views expressed on the matters under consideration. With respect to Working Group I, Mr. E. de Alba-Alcaraz reported on the discussion on principles and on commitments related to paragraph 6(a) of the annex to Committee decision 1/1; Mr. N. Akao reported on the discussion on commitments related to paragraphs 6(b) and 6(c) of the same annex. With respect to Working Group II, Ms. E. Dowdeswell reported, on behalf of Mr. R.F. Van Lierop and on her own behalf, on the discussion on the whole range of issues before the Group. The main points of these impressions are summarized below.

1. Oral reports on Working Group I

(i) Principles

45. Varying degrees of support were expressed for a number of concepts and approaches which could find their place in a statement of principles to guide a framework convention on climate change. Among these concepts and approaches were: Climate change as a common concern of humanity, equity, differentiated responsibility, "polluter pays principle", "precautionary principle", cost-effectiveness, flexibility, compatibility with development needs, sovereignty over natural resources, need for short-term and long-term action, international co-operation, compensation for incremental costs incurred by developing countries, need for mechanisms for finance and transfer of technology, and special circumstances of different groups of countries. Several delegations stressed the principle of comprehensiveness in relation to the control of greenhouse gases; many pointed to the urgency of controlling emissions of carbon dioxide.

46. In the course of the deliberations of the Working Group, many delegations proposed texts on principles in addition to those already submitted in the informal papers before the Committee (A/AC.237/Misc.1, Add. 1-9).

47. Attention was drawn to the inter-relationships among different principles and to the linkages between principles, preambular considerations and general obligations in a framework convention. Some delegations questioned the need for a separate section on principles in the convention.

48. The Bureau of the Working Group made suggestions concerning the grouping of proposed principles under different headings in order to facilitate their consideration. After discussion, the Working Group agreed that the Bureau should prepare a new compilation of principles, organized in appropriate groupings, as an informal document for consideration at the third session of the Committee.

(ii) Commitments related to decision 1/1, annex, para. 6(a)

49. A number of alternative proposals were advanced by delegations in Working Group I concerning general obligations and overall objectives with respect to emissions and sinks. It was proposed, for example, that the framework convention should provide for appropriate measures to stabilize concentrations of greenhouse gases at a level which minimized damage to the environment and to sustainable development and also for States to co-operate, through systematic observation, research and information exchange, in order to better understand the causes and impacts of climate change and possible response strategies. Several delegations favoured the preparation of national inventories which would indicate present and future levels of greenhouse gas emissions and of forest cover and which would describe measures taken to control emissions and to protect and expand sinks. The need to examine the role of the oceans as sink for greenhouse gases was also raised by some delegations.

50. There was a divergence of views in the Working Group concerning the nature of commitments to be included in the framework convention. Several delegations considered that specific commitments should be included; others felt that commitments of this nature should not be sought at the present stage and that the framework convention should provide a flexible system permitting countries to adopt their own strategies.

51. One view, derived from the concept of common but differentiated responsibility, was that specific commitments should be initially undertaken by the industrialized countries and that commitments by developing countries and by countries with economies in transition should be consistent with their economic and developmental needs. The question of the categorization of countries was discussed in this context.

52. Several delegations proposed that specific commitments made by industrialized countries in the framework convention should aim at action in the short term to stabilize carbon dioxide emissions at 1989 or 1990 levels by 2000 or 2005, while also initiating longer-range action aimed at reducing emissions below those levels, provision of additional finance and transfer of technology to developing countries on favourable terms and supporting capacity-building and response strategies in those countries. Other delegations expressed the view that developing countries should make appropriate commitments in the convention regarding future measures in relation to emissions of carbon dioxide and sinks.

53. Measures to ensure the sustainable use of forests and their conservation were the subject of an exchange of ideas in the Working Group.

(iii) Commitments related to decision 1/1, annex, para. 6(b)

54. In discussing financial resources and technology transfer, there was general acceptance that all developing countries which became parties to the convention would need additional financial resources and transfer of technology to enable them to meet their obligations under the convention. The close relationship between commitments in these areas and those concerning emissions and sinks was recognized.

Several delegations were of the view that:

(a) A new fund should be established by the parties under the convention to compensate the developing countries for the incremental costs they would incur through the adoption of appropriate measures under the convention to meet their obligations and alleviate poverty;
(b) The fund should be administered by the parties and contributions should come from the industrialized countries;
(c) The financial resources to be allocated should be new, additional and adequate and should not be diverted from existing bilateral or multilateral financial arrangements.

55. A number of delegations felt that there was no need to establish a new institution, which would be expensive to operate. They stressed that existing financial mechanisms should be used, notably the Global Environment Facility to which some countries had already contributed. They stressed the importance of co-ordinating the Committee's discussions on funding mechanisms with those in the Preparatory Committee for UNCED and in the negotiations on a convention on biological diversity .

56. The Working Group discussed the question of transfer of technology in the general framework of North-South development partnership and regional and subregional cooperation. It was generally considered that the transfer of appropriate and environmentally-sound technology to developing countries was vital if they were to be able to contribute to the reduction of greenhouse gases.

57. Some delegations stressed that technology should be transferred to developing countries, on concessional, preferential and non-commercial terms, in view of the additional financial burden on those countries which would arise from commercial transfers. Some other delegations pointed out that most technologies were developed in the private sector, protected by intellectual property rights and, consequently, transferred in general on commercial terms. Yet others considered that, even in these conditions, governments could facilitate the transfer of technology on a fair and most favourable basis, without necessarily promoting its free transfer.

58. Emphasis was placed on the adaptation of technology to local conditions, on training to develop local expertise and skills, and on the development of endogenous technology. Importance was also attached to the exchange of information on new technologies and to the role of know how. Some delegations considered that joint ventures between companies in developed and developing countries could be an appropriate means for developing and tranferring technology. Several delegations referred to the value of country studies to assess the technological needs of different countries, as well as of inventories of available technologies. The setting up of a clearing house mechanism was also mentioned.

(iv) Commitments related to decision 1/1, annex, para. 6(c)

59. The issue of the special situation of developing countries was in particular addressed by delegations from small island states, who expressed concern over their very survival in the near and longer term. They pointed out that they were already exposed to the adverse effects of climate change. Therefore financial assistance was required now to cope with inter alia sea level rise, increased cyclone activity and coral bleaching. National coastal zone management plans should be developed in accordance with the recommendations of the Coastal Zone Management Group of IPCC. In that regard, the Working Group was informed by observers from UNEP, IOC and IPCC that their organizations were preparing regional assessments of the effects of climate change on sea level rise. One delegation pointed out that in addition to the impact of climate change, resources from the ocean had also to be considered. The particular concern of countries affected by drought and desertification was also expressed. Several delegations drew attention to the special problems of the least developed countries.

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60. At the end of the Working Group's deliberations, it was decided that a new compilation of proposals related to commitments, organized in a structure proposed by the Co-Chairmen, should be prepared and circulated to all governments before the next session of the Committee. (See paras. 33 and 34 above).

2. Oral report on Working Group II

61. In introducing this oral report, the Co-Chairmen stressed that the deliberations and conclusions of Working Group I would have a determining influence on the work of Working Group II. Consequently, their conclusions were for the time being preliminary and tentative.

(i) Matters covered by decision 1/1, annex, para. 7(a)

62. The following common themes had emerged in the view of the Co-Chairmen:

- that mechanisms should be defined pursuant to the commitments arrived at in Working Group I and needed to be flexible, adaptable and respectful of national sovereignty;
- that a Conference of the Parties should be the supreme decision-making body; and that the secretariat which supports the Conference of the Parties should be independent of any other organization;
- that some form of non-adversarial review mechanism that did not focus exclusively on emissions would probably be appropriate;
- that the building of sufficient capacity would determine the ability of countries to meet their commitments; and
- that the reporting of information and data should be based on nationally-designated bodies.

There were divergent views on the following questions:

- whether a dispute settlement mechanism should be compulsory or voluntary;
- whether implementation and review mechanisms should be addressed in the convention or in protocols;
- whether entry into force should be pursuant to ratification by a specified number of countries or by countries producing a specified percentage of global emissions;
- whether reservations to the convention should be allowed.

(ii) Matters covered by decision 1/1, annex, para 7(b)

63. There was virtually unanimous agreement that science and the continuing development of scientific knowledge through research were the bases upon which the convention should rest. Considerable progress had been made in developing a bracketed text on research and systematic observation. There was also general agreement that an annex on this subject would eventually be required.

(iii) Matters covered by decision 1/1, annex, para 7(c)

64. Delegations were generally of the view that these subjects were among the most important for the convention and noted the historical and global nature of the challenge.

The Co-Chairmen identified the following common themes:

- that transfer of technology and adequate and additional funding would be critical in order to allow developing countries to carry out their obligations and responsibilities under the convention;
- that country studies could be very beneficial in clearly defining technology needs and that the lead in this process should be with the country under study;

- that there was a need to devise mechanisms which recognized, supported and further developed local and endogenous technology;
- that education, training, human resource development and institution-building were important components of technology transfer;
- that technologies should be appropriate to the specific situations of particular countries;
- that research to develop environmentally sound technologies should be encouraged;
- that institutional mechanisms concerning transfer of technology and financial resources should be based on a genuine partnership and under the decision-making control of the parties to the convention;
- that lessons learned from the Vienna Convention and its Montreal Protocol were relevant to the establishment of mechanisms under a climate change convention;
- that mechanisms had to be found to promote equitable and democratic decision-making;
- that fulfilment of commitments on funding and technology should be subject to review;
- that institutional duplication should be avoided;
- that there could be a role for institutions such as a technology clearing house, and perhaps also an innovative insurance scheme.

Divergent views had been expressed on the following issues:

- whether financial resources under the convention should be new funds separate from development assistance;
- whether the Global Environment Facility (GEF) was an appropriate mechanism for the transfer of such resources or whether new and different institutions needed to be created;
- whether a Climate Fund should be established and whether it should be based on mandatory assessments or voluntary contributions;
- whether the term "technological transfer" was more appropriate than "technology co-operation";
- whether technology transfer and/or co-operation should be provided on a fair and most favourable or a concessional and non-commercial basis;
- whether intellectual property rights were an impediment to the transfer of technology.

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65. The Working Group concluded its deliberations by recommending that its Co-Chairmen be requested to prepare a single text on all matters relating to its mandate (See para. 43 above).

3. Statements by delegations

66. Following these presentations, the Chairman, on behalf of the Committee, expressed appreciation for the achievement of the Working Groups and their officers in completing a first reading of the various proposals before them and expressed the hope that the work to be undertaken by both sets of Co-Chairmen in the interim would advance substantive negotiations at the third session of the Committee. He called upon delegations which had submitted proposals to review and refine them and to consider combining them with those of other delegations, so as to facilitate the approach to consensus at the third session.

67. At the 8th and 9th plenary meetings on 28 June 1991, a number of delegations made statements commenting on the oral reports by the Co-Chairmen of the two Working Groups and clarifying or reiterating their positions on some issues under negotiation. Those statements conveyed a positive assessment of the work of the Committee at its second session which had been characterized by the presentation of positions and exchanges of views thereon, a determination to use the third session to narrow differences between positions, and a general endorsement of the undertakings of the respective Co-Chairmen to prepare new documentation to facilitate work at the third session (see paras. 33, 34, 43 and 48 above). It was understood, in this connection, that the organization of material in those new documents would be without prejudice to the structure of the framework convention. Some delegations said that they would have wished to mandate the Co-Chairmen of Working Group I to prepare a single text on commitments as a possible basis for consideration, in an exercise parallel to that to be undertaken by the Co-Chairmen of Working Group II. It was recognized, however, that, while the work of the two Working Groups should be co-ordinated, they could use different methods in addressing their distinct tasks.

68. In commenting on substantive issues, several delegations referred to the Ministerial Declaration of the Second World Climate Conference as a source of guidance for the Committee's work. Some delegations referred to the question of including specific commitments in protocols to the framework convention, with views continuing to differ on whether such protocols should accompany the convention or follow it. One delegation expressed the view that the so-called "pledge and review" approach, if it were not linked to commitments, would not help to bring about a convergence of views between developed and developing countries and appealed to its proponents to keep their positions open on this proposal. Another delegation stressed the importance of permitting reservations to non-essential elements of the framework convention, which would encourage more countries to ratify it.

IV. REQUESTS FOR SCIENTIFIC AND TECHNICAL ADVICE FROM THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

A. Statement by the Chairman of the Intergovernmental Panel on Climate Change

69. At its 6th plenary meeting, on 25 June, the Committee heard a statement by the Chairman of the Intergovernmental Panel on Climate Change, Professor Bert Bolin. He foresaw that negotiations on climate change would continue long beyond June 1992 and that IPCC could be the provider of independent scientific and technical advice for the negotiations: in each of its tasks, IPCC distinguished between work which could be completed in time to make results available to INC, and long-term work whose results would become available after 1992. He drew attention to the report of the Panel's fifth session and mentioned that it hed been made available to the Committee. He outlined the six main tasks the Panel had defined:

(a) Assessment of national net greenhouse gas emissions;

(b) Predictions of the regional distributions of climate change and associated impact studies, including model validation studies;

(c) Specific issues related to energy and industry;

(d) Specific forestry-related issues;

(e) Vulnerability to sea level rise;

(f) Emissions scenarios.

He considered these tasks might serve INC in its current efforts in the best possible way, but stressed that IPCC would welcome requests from INC as foreseen by General Assembly resolution 45/212.

B. Statements by delegations

70. In the debate which followed, statements were made by representatives of 21 member States. There was general appreciation of the presentation by Professior Bolin and of the work of IPCC, as well as encouragement for it to support INC by providing, as appropriate, objective scientific and technical advice. A number of countries made proposals on scientific and technical topics on which IPCC advice might help. Some thought these should include socio-economic analyses of relevant issues, whilst others expressed the view that socio-economic analyses of the response strategies should be an integral part of work of INC as the single negotiating process. Several countries referred to the value of national studies and reports, and felt that they should be compiled by countries themselves, using an agreed and shared methodology. There was also support for regional studies. A number of countries considered that the Executive Secretary should have a clear indication of the advice which members of the Committee needed from IPCC.

71. In response, Professor Bolin said that he was grateful for the discussion, had noted the points made and would give them his full attention. He noted that the outcomes of IPCC discussions were, of course, not binding on countries; they provided information to help INC in its deliberations.

72. Summarizing the debate, the Chairman of the Intergovernmental Negotiating Committee said that several delegations had made proposals on technical and scientific advice INC might request from IPCC: countries would need to consider the results of IPCC's work; the preponderance of speakers had spoken in favour of the six tasks IPCC had adopted, though there were varying appreciations of their priority; there was strong agreement that developing countries should play their full role in the scientific and technical work of IPCC and that the relationship between INC and IPCC was unchanged, i.e. the Executive Secretary was charged to co-operate closely with the IPCC to ensure that the Panel could respond to needs and requests for objective scientific and technical advice during the negotiating process.

V. REVIEW OF EXTRABUDGETARY FUNDS

A. Special voluntary fund to support the participation of developing countries

73. At the 7th plenary meeting, on 28 June, the Executive Secretary reported on recent changes in the status of contributions to the special voluntary fund; these are recorded in document A/AC.237/8/Add.1 and Corr.1. He further explained the basis on which it was decided to offer travel and subsistence costs to one delegate each from 99 developing countries (including all the least developed countries and many small island developing countries) and expressed appreciation to the United Nations Development Programme for its help in making the travel arrangements through its field offices. He noted that the number of delegations from developing countries at this session with representation from capitals had more than doubled by comparison with the first session and that many of these delegations included experts. He sought guidance from the Committee concerning the adequacy of the arrangements made and the use of the fund for future sessions of the Committee.

74. Concerning future funding needs, the Executive Secretary reiterated the estimate that a further US $ 1 million would need to be contributed to this fund, beyond amounts already pledged, if the arrangements made for the second session were to be continued and if the Committee were to hold a further session in 1992. He expressed the hope that such contributions would be forthcoming and appealed for prompt payment of moneys currently pledged in order to enable timely arrangements to be made for financing participation in the third session.

75. A number of delegations made statements concerning the adequacy of funds available and the arrangements made by the Executive Secretary for the use of the fund for the second session, including the determination of the list of countries eligible for support and of the number of delegations to be funded for each country. One of these delegations drew attention to the imminence of its payment to the fund; another announced that it would increase its contribution; two others drew attention to their bilateral funding arrangements.

76. In the light of these statements and of the responses made by the Executive Secretary to questions raised, the Chairman expressed the general satisfaction of the Committee, its sense that the Executive Secretary should continue to use this fund for travel and subsistence for delegations from developing countries along the lines adopted in connection with the second session, and its encouragement to him to explore ways of further supporting the effective participation of developing countries. He further expressed the gratitude of the Committee to members that had made new pledges or payments, and its concern that sufficient money should reach the fund in time for arrangements to be made to support participation in the third session. He appealed on behalf of the Committee to all countries in a position to do so to make new or increased pledges to contribute to this fund.

B. Trust fund for the negotiating process

77. Also at the 7th plenary meeting, the Executive Secretary described plans for the further operation of the Committee's secretariat and referred to a number of important decisions on administrative and financial arrangements which needed to be taken in order to ensure that the secretariat could work efficiently. He undertook to assess the performance of the secretariat at the current session and, if necessary, to reinforce its capacity to provide substantive servicing to future sessions, seeking assistance for this purpose from co-operating organizations.

78. Drawing attention to information regarding the costs of the secretariat given in document A/AC.237/8 and subsequently provided to the Committee, he estimated that the expenses for which finance was sought from this trust fund ($ US 560,000) would amount to some 20 percent of the total costs of the secretariat. This estimate assumed that it would not be necessary to use this fund to finance staff costs. He expressed appreciation to the organizations providing staff to the secretariat on a non-reimbursable basis, to the Government providing bilateral funding for an associate expert and to those which had indicated interest in making similar bilateral arrangements. He suggested that such arrangements might be extended to associate experts from developing countries so as to ensure a proper diversity in the staffing of the secretariat.

27 August 1991
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FOR A FRAMEWORK CONVENTION ON CLIMATE CHANGE
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CONSOLIDATED TEXT BASED ON PROPOSALS REGARDING PRINCIPLES AND COMMITMENTS, PRESENTED BY DELEGATIONS

Submitted by the Bureau of Working Group I

Explanatory Note

As requested by the Working Group during the Second Session of the INC, new compilations of principles and commitments have been prepared and circulated to governments as Docs. A/AC.237/Misc.6 and 7.

This paper has been prepared with the aim of simplifying the compilation contained in the above documents and with the hope that delegations will find it helpful in identifying the major issues therefrom and that it could be useful for focusing the discussion of the text of the Convention.

In preparing the paper on principles, the Bureau felt that some of the proposals on principles are better placed in a preambular chapter than in a chapter on principles. All such "principles" have therefore been grouped under preambular provisions, together with some other preambular provisions submitted by delegates.

Concerning the commitments, every effort has been made to reflect objectively the main views and ideas of delegations as contained in the compilations. Due to the fact that a number of proposals were in the form of statements made during the Working Group sessions, it was not possible to formulate some of the provisions in precise legal language.

Issues relating to mechanisms which belong to Working Group II are not addressed in this paper, nor are other issues which we perceive could be best developed under possible related legal instruments i.e. annexes or protocols.

I. PREAMBLE

The Parties to this Convention

Acknowledging that change in the Earth's climate is a common concern of mankind since climate is an essential condition that sustains life,

Affirming their commitments and determinations to take active and constructive steps in a global response, without prejudice to sovereignty of States,

Recognizing the duties of all States to preserve and protect their natural capital/resources for the benefit of present and future generations,

Aware that all inhabitants of the planet have equal rights to the oceanic and other global sinks and to atmospheric resources, subject to provisions of international law,

Considering that all elements of the eco-system are linked, interrelated and interdependent, so that actions in one area influence and have effects upon other areas,

Acknowledging that the global nature of climate change calls for the widest possible association of efforts by all countries and their participation in an international response to climate change in accordance with the means at their disposal and their capabilities,

Recognizing that the developing countries have as their main priority the eradication of poverty and the achievement of economic and social development and that their emission must grow to accommodate their development needs reflecting the equal right of all people in matters relating to living standards,

Mindful of the need to foster international cooperation. enabling cooperative arrangements for understanding and addressing potential climate change in the most effective and efficient manner,

Recognizing that the narrowing of the gap between the developed and developing countries could be the basis for a full partnership of all nations and would assist the developing countries in dealing with the climate change issue,

Fully aware of the special circumstances of the developing countries, particularly their need for financial resources and the requisite technologies,

Recognizing the obligation of developed countries to transfer appropriate environmentally sound technologies to developing countries on

Alternatives:

(A) a concessional and preferential basis

(B) a preferential and non-commercial basis

(C) a fair and most favourable basis,

bearing in mind the need for adequate and effective protection of intellectual property rights,

Urging all countries, the developed countries in particular, to intensify their efforts and international cooperation in technological research, development and dissemination of appropriate and environmentally sound technologies, including the reassessment and improvement of existing technologies and introduction of new technologies,

Further urging that all countries, developed and developing, identify and take effective measures to remove barriers to the dissemination of such technologies, including the restriction on political grounds,

Recognizing the interdependence of environmental protection and economic growth, the need to pursue strategies that advance both goals, the need to achieve a balance between potential ecological and socio-economic consequences of climate change, the cost of abatement policies and the cost of adaptation and to encourage the use of market mechanism, as appropriate, to achieve cost-effective results and to foster free trade,

Recognizing that in order to avoid distortions of competition, the greatest possible harmonization of the measures should be adopted,

Recognizing that no country shall aid or encourage the transfer of technologies that embody human and environmental safety risks,

Affirming the need to ensure that the implementation of the actions taken to combat climate change should not result in the creation of other types of environmental degradation,

Convinced that individual and social behaviour including a dramatic change in production and consumption patterns in industrialized countries, as well as institutional adaptation are key elements of a long term strategy that deals with climate change in a way that meets the goal of sustainable development,

Recognizing the need for an open process, allowing appropriate input from non-governmental organizations, public access to intergovernmental deliberations where appropriate, and public education of the interested global citizenry,

Have agreed as follows:

II. PRINCIPLES

(Sovereignty)

1. States have, in accordance with the charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

2. The Sovereignty of States and of non-interference in the internal affairs of other countries, shall be adhered to in all international affairs including those relating to the protection of global environment.

(Equity/Common but differentiated responsibility/Main responsibility)

Alternative A

The obligations shall be equitably distributed between developed and developing countries in accordance with their common but differentiated responsibility and capabilities, and different time frames be set out for implementation, noting that the largest part of the current emission of greenhouse gases originates in developed countries and those countries have the main responsibility for combating the adverse effects thereof.

Alternative B

Action to be taken should be based on equity, in accordance with the proportionate contributions to the problem, with due regard to the development requirements of developing countries, especially those whose current emissions are low.

Alternative C

There is a global obligation to protect the climate for the benefit of future generations based on principles of equity and common but differentiated responsibilities of countries. In this context, the efforts already undertaken by a number of countries to meet this goal are acknowledged.

(Right to development)

1. The right to development is an inalienable human right. All peoples have an equal right in manners relating to living standards. An appropriate level of economic development is the prerequisite for adopting concrete control measures to address climate change.

(Sustainable development)

1. Compatibility of environment and economic development should be ensured, reflecting the long-term nature of climate change and building the knowledge, technology and resources needed to achieve sustainable development.

2. All countries, particularly developing countries and countries with economies in transition, in exercizing their right to choose the best path to ensure their sustainable development and to reach an appropriate standard of living, shall be entitled to choose the forms of energy which better suit their growth need, specially those energy resources which are characterized by security of access, abundance and low-cost.

(Precautionary principle)

In order to achieve sustainable development in all countries and to meet the needs of present and future generations, precautionary measures to meet the climate challenge must anticipate, prevent, attack, or minimize the causes of and mitigate the adverse consequences of, environmental degradation that might result from climate change, reaffirming that lack of full scientific certainty should not be used as a reason for postponing cost-effective measures and that high priority must be given to solving the remaining major uncertainties regarding causes and effects of climate change.

(Polluter Pays Principle)

Those responsible for causing damage to the environment should bear the responsibility for rectifying that damage and compensate environmental damage suffered by other countries or individuals.

(Non-conditionality)

1. No environmental conditionalities shall be introduced in aid or development financing.

2. No country or group of countries shall introduce barriers to trade on environmental grounds, except on the basis of a decision by the Conference of the Parties.

(Comprehensiveness)

All greenhouse gases, sources and sinks should be considered in the most comprehensive manner possible in the elaboration of response strategies and limitation and adaptation measures should be addressed.

(Special circumstances)

1. All Parties recognize the different circumstances including the particular circumstances of developing countries and countries with economies in transition and shall endeavour to exert all efforts to ensure that those countries are provided with the necessary financial resources and the requisite technologies and means in order to adequately address the problem of climate change.

2. All Parties shall give special consideration, including the adoption of appropriate measures to the situation of developing countries, whose economies are highly dependent on fossil fuels, either because they are not in a position to use substitutes for such fuels or do not possess the flexibility to switch to non fossil fuels or because of their dependence upon the production and exportation of fossil fuels.

3. The particular vulnerability of the Least Developed Countries to the impact and/or potential threat of global climate change needs to be addressed on a priority basis and similar measures should be adopted to address the particular problems and needs, including funding, of low-lying coastal and small vulnerable island countries, some of whose very existence is placed at risk by the consequences of climate change.

(Liability)

This Convention shall be without prejudice to the application of the rules of international law governing the liability of States.

(Flexibility)

Actions should be undertaken in a phased and flexible manner on the basis of medium and long term strategies at national, regional or global level, recognizing that strategies to understand and address climate change will be most environmentally effective and most economical if they are based on and continually reevaluated in light of relevant scientific, technical and economic considerations. The flexibility includes the possibility of exchange between different GHGs (in CO2 equivalents).

I. GENERAL OBJECTIVE

Long term Global Objective

Alternative A

The Parties commit themselves to the stabilization of greenhouse gas concentrations in the atmosphere at a level which minimizes risk to the ecosystem, ecological processes and climatic conditions essential for the functioning of the biosphere and the sustainable development of societies and economies and to minimize the adverse effects of global climate change.

Alternative B

The Parties agree that the ultimate global objective should be to stabilize greenhouse gas concentrations at a level that would prevent dangerous anthropogenic interference with climate. The anthropogenic emissions of carbon dioxide from States should converge at a common per capita level

II. GENERAL COMMITMENTS

In pursuance of the above global objective the Parties shall:

1. Take appropriate measures in accordance with the provisions of this Convention to limit, reduce, modify and control human activities that result or are likely to result, in adverse effects on the global climate.

2. Undertake without delay on the basis of the best available technology, suitable measures for the effective limitation/reduction of emissions of all anthropogenic climate - related gases in particular CO2, CH4, N20, CO and VOC as precursors of tropospheric ozone;

3. Prepare and update national and/or regional programmes or strategies, develop and periodically update public national inventories of net emissions using an agreed methodology and adopt measures which are justified for a variety of reasons and which also have the effect of limiting or adapting to any adverse effects of climate change;

4. Aim at energy conservation, rational use of energy and development of renewable energy sources;

5. Refrain from subsidizing activities, inter alia, in the energy domain, which contribute to global warming;

6. Aim at conserving national carbon reservoirs and sinks, developing integrated strategies to increase sinks, achieving sustainable forest management, reducing deforestation and promoting afforestation;

7. Conduct environmental impact assessments in order to avoid taking measures which cause or could cause other adverse social and environmental effects and risks;

8. Cooperate by means of systematic observations, research and information exchange in order to better understand and assess the effects of human activities on climate and the environmental and socio-economic impact of climate change;

9. Adopt appropriate legislative and administrative measures and cooperate in harmonizing appropriate policies to address climate change;

10. Develop, coordinate and harmonize market policy instruments;

11. Ensure expeditious transfer of the best available environmentally sound technology on a fair and most favourable/a concessional and preferential/a preferential and non-commercial basis to developing countries and promote rapid development of such technology in these countries;

12. Ensure, through appropriate mechanisms, that developing countries have access to new/adequate and additional funds to meet their incremental costs of combating climate change;

13. Prepare for anticipated climate change;

14. Encourage the promotion of public education and awareness of the environment and socio-economic impacts of greenhouse gas emissions and of climate change and cooperate therein;

15. Cooperate effectively with competent international organizations to meet the objectives of the convention;

III. ADDITIONAL MEASURES

The provisions of this Convention shall in no way affect the right of Parties to adopt in accordance with international law, domestic or international measures additional to those referred to in articles I and II nor shall they affect additional domestic or international measures already taken, or entered into, by a party, provided that those measures are compatible with their obligations under this Convention and any protocol to which they are party.

IV. SPECIFIC COMMITMTENTS

IV.1 Sources

1. Stabilization of emissions

The Parties/developed countries Parties shall commit themselves to the stabilization of:

Alternative A

Global/energy related CO2 emissions at their 1990 level by the year 2000.

Alternative B

CO2 emissions as soon as possible in general at present levels.

Alternative C

CO2 emissions by all Parties, developed countries in particular, in a given time frame and drawing out measures for decreasing the other GHGs.

Alternative D

Greenhouse gas emissions, excluding the requirements under the Montreal Protocol at 1989 levels as soon as possible at the latest by 2000.

Alternatives for Developing Countries

Alternative A

All developing countries Parties shall commit themselves to appropriate action to reduce the threat of human-induced climate change and take as a guideline to keep future net growth of GHG emissions to the lowest level possible, having due regard to their development requirements and their capabilities.

Alternative B

Developing counries may, in accordance with their national development plans, priorities and objectives, consider feasible measures with regard to climate change provided that the full incremental costs involved are met by provision of new and additional financial resources from developed countries Parties.

2. Reduction

(Quantitative alternatives)

The Parties/developed countries Parties shall commit themselves to:

Alternative A

reduce CO2 emissions. This objective must be formulated on the premise that emissions from States will converge at a common level expressed in tons per inhabitant. It would correspond, according to the IPCC studies, to an overall reduction of more than 50 per cent compared to present global emissions, i.e. 0.35 of a ton of carbon per inhabitant per year by 2030. The target should be expressed in absolute terms and not in relative terms with respect to a level of emissions in an arbitrarily selected year.

Alternative B

take first steps towards the reduction of all/energy related CO2 emissions in the years 2005 and 2010; as well as a definition of the objectives and measures to reduce and limit further all/energy-related emissions, in particular CH4, NOx, CO and VOC emissions.

Alternative C

a 20% reduction of CO2 emissions for the industrialized countries in the year 2005 and further reduction at later stages.

Alternative D

prepare national targets for stabilization and/or reduction of other greenhouse gases or combinations of greenhouse gases not covered by the Montreal Protocol when sufficient knowledge allows and consider proposals for emission reduction targets separately for CO2 and other greenhouse gases including possible strategy options aimed at progressive reductions at the horizon 2005 and 2010.

Alternative E

stabilize and reduce their per capita emissions of greenhouse gases, particularly carbon dioxide; stabilization of emissions of greenhouse gases, other than those controlled by the Montreal Protocol, particularly carbon dioxide, should be achieved by the developed countries Parties at the latest by the year 2000 and should be set at 1990 emission levels, with the goal of achieving at least a (20%) (30%) (40%) (50%) reduction on these stabilized levels by the year 2005;

(Qualitative)

Alternative F

The implementation of actions designed to reduce CO2 emissions by pricing, introduction of harmonized incentives or regulatory measures in areas of industry, transport and construction, and the emergence of coordinated international effort for technological developments in energy management.

Alternative G

Developed/all countries should analyze the feasibility of and options for developing programmes, strategies and/or targets for a staged approach for achieving reductions of all greenhouse gas emissions, not controlled by the Montreal Protocol, over the next two decades and beyond.

3. Sinks

The Parties shall:

1. Promote the protection and enhancement of sinks and reservoirs of greenhouse gases through the adoption of appropriate national forest policies, including minimum tree cover in all countries;

2. Conserve their forests, as extensively as possible, by counteracting the causes of the threat posed to them i.e. the emission of pollutants or environmentally damaging use;

3. Set differentiated objectives and measures aiming at the reduction of the annual deforestation rate with a view to ending forest destruction completely;

4. Carry out site-based afforestation and regeneration measures in order to create additional forests as CO2 sinks and improve the CO2 binding process in existing forests;

5. Quantify the forest area required for reasons of climate protection and use this figure as an objective for all activities in the field of forest conservation and afforestation;

6. Develop measures with regard to other CO2 sinks and reservoirs (in particular oceans and seas).

7. Promote additional scientific information on the role of forests and oceans as sinks of carbon dioxide;

8. Practice sustainable forest management and agricultural techniques which reduce greenhouse gas emissions;

9. Set appropriate national forestation target which take account of the different national circumstances and which includes the maintenance of existing forest area or reafforestation and afforestation.

4. National [targets or] strategies or programmes

The Parties shall:

1. Formulate and implement national programmes and strategies with regard to the limitation of greenhouse gas emissions, conservation and enhancement of sinks as well as strategies to mitigate adverse effects of climate change. These programmes should include information about current and projected emission levels, the current and projected status of forests and other carbon sinks and measures - planned or in force - to combat global warming.

2. Take appropriate measures that prevent, limit, reduce or facilitate adaptation to climate change to the extent deemed desirable in the light of the scientific, technical, economic and environmental bases.

3. Adopt, as quickly as possible, measures which are beneficial for reasons other than climate change and justified in economic terms.

4. Allow a stepwise approach to a comprehensive solution by providing a framework for setting priorities, taking into account inter alia present knowledge, emission levels, options available to control greenhouse gas emissions and the specific circumstances of certain regions and countries.

5. Enhance the understanding of the global problem and reduce uncertainties and address the issue of climate change in a realistic, holistic and comprehensive manner, instead of committing target emissions of CO2 and in the energy sector alone.

6. Strike a balance between environment and economic development, taking into account the possible impact of measures on the world economy and trade, as well as the economic capabilities of developing countries and their specific energy needs.

7. Take into account the best available Global Warming Potential in the development of national, regional and international response strategies.

8. Take measures for limiting emissions in certain sectors of the economy.

9. Develop national coastal zone management plan, emergency procedures, coastal zone response mechanisms and a global ocean-observing network, and undertake assessments of the resilience and adaptability of resources.

5. Implementation of commitments

Note:
1. Mechanism for the implementation of commitments will be considered by WG II as a part of compliance mechanism.
2. For the implementation of the commitments by developing countries the next section will consider the adequate and additional financial resources to meet the incremental costs and facilitate the transfer of technology.
3. Section VI will consider the special situation of some developing countries in relation to commitments.

6. Protocols

The more specific obligations which countries will enter into shall be elaborated in annexes or protocols to this Convention.

V. FINANCIAL AND TECHNOLOGY TRANSFER

1. The Parties agree to commit new, adequate and additional/adequate and additional financial resources to enable developing countries to meet full incremental costs required to fulfil the commitments referred to in articles II and III and facilitate the transfer of technology expeditiously on a fair and most favourable basis.

Alternative A

2. The Parties shall create an international climate fund to expeditiously mobilize new and additional financial resources for developing countries Parties, in order to:

(a) implement obligations under the Convention;

(b) adapt to and mitigate the adverse effects of climate change;

(c) provide assured access to appropriate, environmentally sound technologies on preferential and non-commercial terms to developing countries;

(d) support developing countries in their efforts to create and develop their endogenous capacities in scientific and technological research and development, monitoring and information directed at combating climate change;

(e) strengthen institutional capacities for dealing with climate change at national levels, including human resources development.

Alternative B

2. The developed countries shall provide financial assistance to developing countries in order to help them to meet the incremental costs required to achieve further limitations of greenhouse gas emissions by promoting and developing the existing mechanisms includimg GEF and an enlarged UNDP.

3. Developed countries shall provide new, adequate and additional resources and transfer technologies in accordance with national circumstances and support sustainable development, recognizing the need for developing countries to use their natural resources in an environmentally sound manner, in view of improving the quality of life of their populations.

4. The Parties shall cooperate, consistent with their national laws, regulations and practices and taking into account the particular needs of developing countries in promoting directly or through competent intergovernmental bodies, the development and transfer of environmentally sound technology and knowledge required to combat the adverse effects of climate change.

VI. SPECIAL SITUATION OF DEVELOPING COUNTRIES

1. The Parties shall give priority to the specific needs of small island developing countries, low-lying coastal areas, arid and semi-arid areas, tropical regions liable to flooding, areas liable to drought and desertification and the least developed countries, in the transfer of technology and funding, to enable them to combat the adverse effects of climate change.

VII. ECONOMIES IN TRANSITION

1. The Parties recognize that in the implementation of the commitments of the Convention an additional degree of freedom to stabilize their economy and modernize their industry and agriculture, has to be given to countries with economies in transition.

25 October 1991

ORIGINAL: ENGLISH

READY

JAN 15 1992

UNFCCC SECRETARIAT

INTERGOVERNMENTAL NEGOTIATING COMMITTEE
FOR A FRAMEWORK CONVENTION ON CLIMATE CHANGE
Fourth session
Geneva, 9-20 December 1991
Item 2(a) of the provisional agenda

ELEMENTS RELATED TO THE PREAMBLE, PRINCIPLES AND COMMITMENTS

Text submitted by the Bureau of Working Group I

CONTENTS

		Page
I.	Preamble	2 - 5
II.	Principles	6 - 8
III.	Objective of the Convention	9
IV.	Commitments on sources and sinks	10 - 15
V.	Commitments on financial resources and technology transfer	16 - 19
VI.	Commitments related to para.6(c) of decision 1/1	20 - 21

Explanatory Note

In accordance with the mandate given to the Bureau of Working Group I at the third session of the INC this text has been prepared on the basis of the revised conference room papers. These papers will be made available at the fourth session and are contained in document A/AC.237/WG.I/WP.1.

I. PREAMBLE

The Parties to this Convention:

Concerned that emissions from human activities are substantially increasing atmospheric concentrations of greenhouse gases, and that these increases will result in additional warming of the Earth's surface and thus adversely affect mankind through shifts in rainfall patterns, increased climate instability and rises in sea level, thereby threatening present and future generations of mankind,

Aware of the potentially severe social and economic consequences as well as the consequences for human health and the environment of the adverse effects of climate change,

Acknowledging that change in the Earth's climate is a common concern of mankind since climate is an essential condition that sustains life,

Acknowledging further that the global nature of climate change calls for the widest possible association of efforts by all countries and their participation in an international response to climate change in accordance with the means at their disposal and their capabilities,

Recalling the pertinent provisions of the Declaration of the United Nations Conference on the Human Environment (Stockholm 1972) and in particular Principle 21 which provides that "States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction",

Recognizing the need to strengthen international cooperation on climate change through the development, within a global framework of appropriate policies including the preparation of protocols on specific problems and by means of increasing research into atmospheric science as well as into the social and economic impacts of climate change, systematic observations, cooperation on scientific, technical and legal matters and exchange of information,

Recalling the provisions of General Assembly resolutions 43/53 of 6 December 1988, 44/207 of 22 December 1989 and 45/212 of 21 December 1990 on Protection of Global Climate for present and future generations of mankind,

Recalling also the provisions of General Assembly resolution 44/228 of 22 December 1989 on the United Nations Conference on Environment and Development,

Recalling further the provisions of General Assembly resolution 44/206 of 22 December 1989 on the possible adverse effects of sea level rise on islands and coastal areas, particularly low lying coastal areas,

Noting the Ministerial Declaration adopted at the Second World Climate Conference in 1990,

Noting the significant contribution made towards combating activities that result in adverse effects on the Earth's climate by the Vienna Convention for the Protection of the Ozone Layer, adopted on 22nd March 1985, and the Montreal Protocol on Substances that Deplete the Ozone Layer, adopted on 16th September 1987 and adjusted and amended on 29th June 1990,

Conscious of the valuable work that has already been instituted, particularly at the scientific level, on change in the global climate by the United Nations Environment Programme, the World Meteorological Organization, the Intergovernmental Panel on Climate Change and other organizations, as well as under the auspices of individual States,

Recognizing the need to take actions in a flexible manner on the basis of short, medium and long term comprehensive strategies at national, regional or global level, also recognizing that strategies to understand and address climate

change will be environmentally, socially and economically most effective if they are based on and continually re-evaluated in the light of relevant scientific, technical and economic consideration,

Affirming that the protection and enhancement of the environment and economic development should be coordinated harmoniously and be viewed in an integrated manner, taking into full account that developing countries have as their main priority the eradication of poverty and the achievement of social and economic development,

Recognizing that the need to improve the international economic environment for the developing countries and promotion of their sustained economic development are prerequisites for enabling developing countries to participate effectively in the international efforts to protect the global environment,

[Reaffirming the importance of integrating environmental concerns and considerations into policies and programmes in all countries without introducing a new form of conditionality in aid or development financing or constituting a pretext for unjustified barriers to trade,]

Determined to protect global climate for present and future generations,

Have agreed as follows:

II. PRINCIPLES

1. Sustainable development

Environmental protection and economic development shall proceed in an integrated manner in the light of country-specific conditions, and all countries, particularly developing countries, least developed countries and countries with economies in transition, in exercizing their right to choose the best path to ensure their sustainable development and to reach an appropriate standard of living shall be entitled to choose the forms of energy which suit their growth need best, especially those energy resources which are characterized by security of access, abundance and lower costs. States shall make every effort to ensure that measures to combat climate change are integrated into their development strategies and designed to reinforce their development.

2. Precautionary principle

In order to achieve sustainable development in all countries and to meet the needs of present and future generations, precautionary measures to meet the climate challenge must anticipate, prevent, attack, or minimize the causes and mitigate the adverse consequences of, environmental degradation that might result from climate change, reaffirming

that lack of full scientific certainty should not be used as a reason for postponing cost-effective measures and that high priority must be given to solving the remaining major uncertainties regarding causes and effects of climate change.

3. Equity and common but differentiated responsibility

All States have an obligation to protect the climate for the benefit of present and future generations of mankind. This obligation shall be equitably distributed between countries in accordance with their common but differentiated responsibility and capabilities and different time frames set out for implementation noting that the largest part of current emissions of greenhouse gases originates from developed countries and those countries have the main responsibility in combating climate change and the adverse effects thereof.

4. Right to development

[The right to development is an inalienable human right. All peoples have an equal right in matters relating to living standards. An appropriate level of economic development is the prerequisite for adopting concrete control measures to address climate change. The energy consumption of developing countries must grow. Any limitation of control measures shall take full account of the per capita emission level of various countries and the development needs of developing countries.]

5. Polluter pays principle

[Those countries responsible for causing damage to the environment through inducing climate change should, subject to their capacity, bear the responsibility for rectifying that damage and compensate for environmental damage suffered by other countries or individuals in other countries.]

6. Special circumstances

The special circumstances and needs of particular groups of Parties shall be taken into full consideration in this Convention including the transfer of financial resources and technology.

III. OBJECTIVE OF THE CONVENTION

The Parties agree that the objective of the Convention is to achieve stabilization of greenhouse gas concentrations in the atmosphere at a level which would prevent dangerous anthropogenic interference with climate and which would minimize risk to and adverse effects on the ecosystem, ecological processes and climatic conditions essential for the functioning of the biosphere and the sustainable development of societies and economies. [The anthropogenic emissions of carbon dioxide from States should converge at a common per capita level, taking into account net carbon dioxide emissions during the century.]

IV. COMMITMENTS ON SOURCES AND SINKS

IV.1 Common commitments

In pursuance of the above global objective, the Parties shall commit themselves to cooperate in accordance with the means at their disposal, capabilities and responsibilities to:

1. Develop and periodically update public national inventories of sources and sinks of greenhouse gases using an agreed methodology.

2. Formulate and implement national or regional programmes and strategies with regard to the limitation of greenhouse gas emissions, conservation and enhancement of sinks as well as strategies to mitigate adverse effects of climate change including preventive measures which can also be beneficial for reasons other than climate change. These programmes should include information about current and projected emission levels, the current and projected status of forests and other carbon sinks and measures - planned or in force - to combat global warming.

3. Promote energy conservation, rational use of energy, energy efficiency and development and use of environmentally and economically feasible new and renewable energy sources, that minimize the emissions of greenhouse gases taking into account the particular conditions of each country.

4. Promote the protection and enhancement of sinks and reservoirs of greenhouse gases through the:

(a) management of forests in a sustainable manner and practice of appropriate agricultural techniques, with the aim of reducing the degradation of forests and other ecosystems, taking into account local socio-economic needs and land-use patterns as well as maintaining the ecological balance in the area concerned;

(b) implementation of site-based afforestation and regeneration measures in order to create additional forests as CO2 sinks and improve the CO2 binding process in existing forests;

(c) maintenance and enhancement of the amount of biomass in forest ecosystems and promotion of their health and ability to absorb CO2 and other greenhouse gases;

(d) management of forest ecosystems, as extensively as possible in their best possible structure, by counteracting the causes of the threat posed to them i.e. the emissions of pollutants or environmentally damaging use;

(e) reduction of the rate of deforestation, where appropriate, with the primary aim of stabilizing the forest area, and secondly increasing it further;

(f) development of measures with regard to other sinks and reservoirs (such as oceans and seas) of CO2 and other greenhouse gases.

5. Develop national coastal zone management plan, emergency procedure, coastal zone response mechanisms and a global ocean-observing network, and undertake assessments of the resilience and adaptability of resources.

6. Conduct timely environmental impact assessment of action proposed for the purpose of addressing climate change in order to avoid taking measures which cause or could cause other significant adverse social, health, economic and environmental effects and risks.

7. Promote systematic observations, research and information exchange in order to improve scientific knowledge and better understand and assess the effects of human activities on climate and the environmental and socio-economic impact of climate change and the response strategies required to deal with such change in collaboration with relevant international organizations.

8. Further promote the development of additional scientific research and exchange of information on the role of soils, forests, oceans and seas as sinks and reservoirs for greenhouse gases.

9. Encourage the promotion of public education and awareness of the environment, socio-economic impacts of climate change and promote the participation of environmental non-governmental organizations in these activities.

10. Develop and adopt policies and practices to prepare for climate change as appropriate to their circumstances and capacities.

11. Develop, coordinate and harmonize if necessary, economic instruments, such as subsidies, taxes and charges, as well as other relevant instruments aimed at limiting net emissions of greenhouse gases.

IV.2 Other commitments

1. The [Parties]/[developed country Parties] shall undertake without undue delay on the basis of the best available and economically reasonable and appropriate technology, in accordance with local specific conditions suitable cost-effective measures for the effective limitation/reduction/control of net emissions of [all] greenhouse gases in particular CO2.

2. Developing country Parties [may]/[shall], in accordance with their national development plans, priorities and objectives, consider feasible measures with regard to climate change provided that the full incremental costs involved are

met by provision of new and additional financial resources from developed country Parties. Developing country Parties may increase fossil fuel use to enable the orderly transition to non-fossil fuel economies.

IV.3 Specific commitments for stabilization and reduction of emissions

1. Stabilization of emissions

The [developed country Parties] /[Parties, in particular the developed country Parties] individually or as a group of countries shall [commit themselves to the stabilization of]/[make best efforts to stabilize]

Alternative A

(i) [net] emissions of [energy related]/[anthropogenic] CO2 at [in general] the 1990 levels by the year 2000.

(ii) [net] emissions of [energy related]/[anthropogenic] greenhouse gases [other than those controlled by the Montreal Protocol] at [in general] 1990 levels by the year 2000.

Alternative B

net emission of greenhouse gases as soon as feasible, recognizing differences among countries in a number of respects.

2. Reduction of emissions

The developed country Parties shall commit themselves to take steps towards reducing all [energy related] CO2 emissions between the years 2005 and 2010 taking into account the most authoritative scientific advice available and setting targets to reduce and limit all [energy related] emissions of greenhouse gases.

3. Joint implementation

Countries shall have the option to implement specific emission commitments individually or jointly in cooperation with another Party. This cooperation may take place on a bilateral, regional and global level. When Parties cooperate in implementing commitments, the net reduction in emissions shall be credited to their respective commitments under this Convention in accordance with agreements between the cooperating Parties, and subject to criteria approved by the Parties.

V. COMMITMENTS ON FINANCIAL RESOURCES AND TECHNOLOGY TRANSFER

The developed country Parties shall commit adequate [new] and additional financial resources [to the ones that are disbursed for development at the time of the signing of the Convention], to enable developing country Parties to meet [full]/[agreed] incremental costs required to fulfil the commitments under the Convention and ensure the transfer of environmentally sound technologies to developing country Parties expeditiously on a [fair and most favourable]/[preferential, concessional and non-commercial] basis.

V.1 Provision of financial resources

1. The Parties shall create an international climate fund specific to this Convention to expeditiously mobilize [new and] additional financial resources from developed country Parties and other Parties in a position to do so for developing country Parties in order to:

(a) implement commitments under the Convention;

(b) adapt to and mitigate the adverse effects of climate change in accordance with their national development plans, priorities and objectives, and compensate the social and economic imbalances that result from the implementation of the Convention;

(c) provide assured access to appropriate environmentally [safe and] sound "state-of-the-art" technologies;

(d) complement their efforts to create and develop their endogenous capacities in scientific and technological research and development, systematic observations and information directed at combating climate change;

(e) strengthen operative institutional capacities for dealing with climate change, including human resources development;

(f) promote research on emission control of the GHGs from existing activities especially in the energy, transport, agriculture and industrial sectors;

(g) conduct research and pilot projects on the enhancement of natural GHG sinks including afforestation of deserts and other ecosystems, halophyte afforestation and expansion of coral reefs and oyster bank ranges.

2. The fund shall operate under the authority of the Conference of the Parties and shall be [distinct from Global Environment Facility]/[governed and administered as a Trust Fund by the GEF of IBRD/UNDP/UNEP].

V.2 Transfer of technology

1. The Parties shall take every practicable step to ensure that requisite environmentally [safe and] sound technologies are expeditiously transferred so as to meet the technological needs of the Parties that are developing countries in implementing their commitments under the Convention.

2. The Parties shall ensure that the transfer referred to in paragraph (1) above is made to the Parties that are developing country Parties under [fair and most favourable]/ [preferential, concessional and non-commercial] basis;

3. The Parties shall cooperate, consistent with their national laws, regulations and practices and taking into account the particular needs of developing country Parties, in promoting directly or through competent intergovernmental bodies, the development and transfer of environmentally [safe and] sound technology and knowledge. Such cooperation shall be carried out particularly through:

(i) facilitation of the acquisition of environmentally [safe and] sound technologies by other Parties;

(ii) provision of information on up to date environmentally [safe and] sound technologies and equipment, including supply of special manuals or guides to other Parties;

(iii) supply of necessary equipment and facilities for research and systematic observation; and

(iv) appropriate training of scientific, technical and managerial personnel.

4. [Non-compliance procedure and intellectual property rights should not be applied against developing country Parties if patented technology mandated by conventions is not accessible to them.]

VI. COMMITMENTS RELATED TO PARAGRAPH 6 (c) OF DECISION 1/1

1. The Parties shall give full consideration to the specific needs, including the transfer of technology and funding, of developing country Parties especially

- small island developing countries,
- low lying coastal areas,
- arid and semi-arid areas,
- areas prone to natural disasters including tropical cyclones, flooding and erosion,
- areas liable to drought and desertification, and high urban atmospheric pollution,
- areas with fragile ecosystems, including mountainous ecosystems,

in order to enable them combat the adverse effects of climate change.

2. The developed country Parties agree to take full account of the special situations of the least developed countries in their action with regard to funding and transfer of environmentally sound technology.

3. The Parties shall give special consideration to the situation of the Parties particularly the developing country Parties whose economies are highly dependent on fossil fuels, either because they are not in a position to use substitutes

for such fuels or do not possess the flexibility to switch to non-fossil fuels, or because of their dependency upon the production and exportation of fossil fuels and associated energy intensive products.

4. The Parties recognize that in the implementation of the commitments of the Convention a certain degree of flexibility to stabilize their economy and modernize their industry and agriculture has to be given to countries with economies in transition.

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INTERGOVERNMENTAL NEGOTIATING COMMITTEE
FOR A FRAMEWORK CONVENTION ON CLIMATE
CHANGE
Third session
Nairobi, 9-20 September 1991

REPORT OF THE INTERGOVERNMENTAL NEGOTIATING COMMITTEE FOR A FRAMEWORK CONVENTION ON CLIMATE CHANGE ON THE WORK OF ITS THIRD SESSION, HELD AT NAIROBI FROM 9 TO 20 SEPTEMBER 1991

CONTENTS

		Paragraphs	Page
I.	INTRODUCTION	1	3
II.	ORGANIZATIONAL MATTERS	2 - 13	4
	A. Opening of the session	2	4
	B. Attendance	3 - 8	5
	C. Adoption of the agenda	9	9
	D. Documentation	10	9
	E. Organization of work	11	9
	F. Dates and venues of future sessions	12	9
	G. Provisional agenda for the fourth session	13	10

CONTENTS (continued)

		Paragraphs	Page
III.	PREPARATION OF A FRAMEWORK CONVENTION ON CLIMATE CHANGE.....	14 - 100	11
	A. Statements by representatives of programmes and organizations of the United Nations system.....	14 - 18	11
	B. Report on Working Group I : Commitments...	19 - 31	12
	C. Report on Working Group II: Mechanisms....	32 - 71	14
	D. Consideration by the Plenary of progress reports submitted by the Working Groups	72 - 100	19
IV.	REVIEW OF EXTRABUDGETARY FUNDS.....	101 - 111	25
	A. Special voluntary fund to support the participation of developing countries.....	101 - 106	25
	B. Trust fund for the negotiating process.....	107 - 111	26
V.	ADOPTION OF THE REPORT.....	112 - 114	27
VI.	CLOSURE OF THE SESSION.....	115	27
Annex:	List of documents before the Committee at its third session.....		28

by delegations at the present and previous sessions, and those which might be received by the secretariat before 15 October 1991, with a view to having it serve as a basis for discusssion at the fourth session of the Committee.

71. The Working Group expressed the hope that the revised text to be prepared by the Co- Chairmen would be made available to delegations in all the official languages, well in advance of the fourth session of the Committee.

D. Consideration by the Plenary of progress reports submitted by the Working Groups

72. At the 3rd plenary meeting, on 13 September, the Co-Chairman of Working Group I, Mr. Edmundo de Alba-Alcaraz (Mexico) and the Co-Chairman of Working Group II, Mr. Robert F. Van Lierop (Vanuatu), reported orally, on their own behalf and on behalf of Co-Chairmen Mr. Nobutoshi Akao (Japan) and Ms. Elizabeth Dowdeswell (Canada) of Working Groups I and II respectively, on the progress made in their work since the beginning of the session. The Chairman made a statement. Statements were made by representatives of three States, including one on behalf of the Group of 77.

73. At the 4th plenary meeting, on 20 September, the respective Co-Chairmen of Working Groups I and II presented oral reports to the Committee on the work accomplished during the present session, giving their own impressions of convergences and divergences in views expressed on the matters under consideration. With respect to Working Group I, Mr. E. de Alba-Alcaraz reported on the discussion on principles and on commitments related to paragraph 6(a) of the annex to Committee decision 1/1; Mr. N. Akao reported on the discussion on commitments related to paragraphs 6(b) and (c) of the same annex. With respect to Working Group II, Ms. E. Dowdeswell and Mr. R.F. Van Lierop reported on the progress made towards achieving the objectives the Working Group had set itself. The main points of these impressions are summarized below.

I. Oral reports on Working Group I

(i) Principles

74. Three main ideas emerged from the discussion on principles:

(a) Most delegations felt that a chapter on principles was indispensable since it was meant to give orientation to the commitments and related mechanisms to be agreed upon under the Convention ;

(b) Many delegations were of the view that the chapter on principles should be closely linked to the obligations to be decided upon in the Convention;

(c) Some delegations questioned the need to include a separate chapter on principles under this Convention.

75. In stating their preferences several delegations indicated that some texts related to principles in the documents would more appropriately belong to the preambular chapter or the chapter on commitments. Those delegations favouring the inclusion of a chapter on principles indicated that they would like to see it short and to include a few major principles to govern and provide a solid foundation for the commitments and related mechanisms to be agreed upon in the Convention.

76. The inclusion of the principles of sovereignty, equity, common but differentiated responsibility and the precautionary principle was broadly supported; however, views differed on their wording and placement in the structure of the Convention. The inclusion of the concept of right to development was broadly supported but also questioned by some delegations. There was disagreement on the inclusion of the polluter pays principle and the principle of non-conditionality among the Group, as well as differences of interpretation and legal implications of these two principles. Several delegations considered of utmost importance the inclusion of the principle of additional financial resources and transfer of technology, and others felt that it might best be embodied either in the obligations or commitments.

(ii) Commitments related to decision 1/1, annex, para. 6(a)

77. The discussion on sources and sinks followed the structure contained in the consolidated text prepared by the Co-Chairmen (A/AC.237/Misc.9). In the course of the discussion on this item it became clear that the stucture was closely interrelated with the substance itself. Several suggestions were made regarding the structure, and this issue will be taken up in subsequent meetings of the Working Group. There was general agreement that the inclusion of a section on the long-term global objective was desirable. Delegations, however, differed on how the provisions were to be formulated.

78. On general commitments, some delegations were of the view that most of the commitments in that section were of a specific nature and should be applicable to developed countries only, with the exception of a few paragraphs. Some delegations on the other hand were of the view that obligations and commitments of a general nature should apply to all Parties including developing countries. In this connection some delegations stressed that the provision of financial resources should be linked with the acceptance and implementation of commitments and obligations on the part of developing countries. There were also proposals to differentiate between commitments by different categories of countries. Several countries proposed that the commitments should be structured according to the level of development, responsibility, etc. In this regard it was suggested that there should not be just two categories of countries, i.e. developed and developing, but several categories of countries. Others suggested that commitments should be structured according to the respective responsibilities of the Parties for inducing climate change and taking into account levels of per capita CO2 emission and per capita GNP. In this case, there should be two categories only, developed and developing.

79. Concerning stabilization and reduction of greenhouse gas emissions, many delegations proposed that stabilization of CO2 emissions should be undertaken by developed countries as soon as possible, more specifically at 1990 levels by the year 2000. There was also a proposal for options to implement commitments in cooperation with other Parties. In this connection the establishment of a clearing house mechanism was proposed. The general feeling of the Group was that there should be different degrees of commitments for developed and developing countries. The importance of reduction of emissions was stressed but the issue was not fully discussed.

80. With regard to sinks, whilst recognizing the importance of forests as a sink, many delegations stated that the issue of forests should be treated in general terms under this Convention since the issue was being considered in greater detail in the UNCED process. Other delegations were, however, of the view that forests should be adequately treated under the Convention. The important role of the oceans and seas as sink for GHGs was also emphasized, with suggestions being made for its further examination.

81. Another isssue discussed at length by the Working Group was the possible inclusion of a section on national strategies and programmes. Some delegations stressed the need for the formulation and implementation of national strategies or programmes. This section did not find favour with many developing countries who stated that it would constitute an interference in their domestic policy. As a means of ensuring the implementation of commitments on sources and sinks, reference was made to the concept of pledge and review.

(iii) Commitments related to decision 1/1, annex, para. 6(b)

82. With regard to commitments on financial resources and transfer of technology, there was clear recognition by the Working Group that this subject constituted a key element of the Convention if developing countries were to be able to meet their obligations and commitments. Many delegations from developing countries stressed that their ability to meet their commitments under the Convention was predicated on the provision of financial resources and technology transfer. Developed countries on the other hand were of the view that the provision of financial resources and transfer of technology was dependent on a commitment on the part of developing countries to implement their obligations under the Convention. There were two schools of thought on the mechanism to be adopted to facilitate the transfer of financial resources. Some delegations were in favour of strengthening bilateral arrangements and existing multilateral institutions, including the Global Environment Facility being operated under the aegis of the World Bank, UNDP and UNEP. Other delegations stated their preference for the creation of an international climate fund through which adequate, new and additional financial resources would be transferred from the developed countries. There was general agreement that whatever funding mechanism were created, it should be governed by the Conference of the Parties. On the question of contributions, one delegation was of the view that it should be on a voluntary basis. Others felt that contributions should be under an adjusted United Nations scale of assessment, or be governed by the principles of burden sharing.

83. Discussion on the transfer of technology centered on how it was to be effected, and on the type of technology to be transferred. A number of delegations were of the view that the transfer of technology should be on a fair and most favourable basis. Other delegations were in favour of a preferential, concessional and non-commercial basis for the transfer of technology. The transfer of safe and environmentally sound technologies as well as state-of-the-art technology was also discussed. The development of endogenous technology was highlighted.

84. Other proposals considered by the Group included: (a) the need to develop a methodology for country studies; (b) the concept of debt for environment; and (c) the creation of a Special Task Force to evaluate and recommend environmentally safe and sound technology for use by all Parties.

(iv) Commitments related to decision 1/1, annex, para. 6(c)

85. In discussing special situations, full recognition was given to the needs of developing countries, especially small island States, least developed countries, low lying coastal areas, arid and semi-arid areas, tropical areas liable to flooding, areas prone to tropical cyclones, areas liable to drought and desertification and fragile ecosystems including mountainous ecosystems. On the same subject, one delegation registered a note of caution by saying that in identifying special circumstances and situations, stark differentiation between categories should be avoided. It was further stated that more effort would be needed in the course of the negotiations to devise nuanced and flexible criteria for differentiation which acknowledged not only vulnerabilities but varying degrees of economic development and different capacities to accept and implement commitments to control emissions.

86. With regard to countries with economies in transition, there was general recognition that their problems should be given special attention. One delegation, however, felt that the category was vague and required proper clarification. Another delegation was of the view that countries with economies in transition should make commitments regarding greenhouse emissions, but that these commitments should be more flexible than those for the industrialized countries.

87. Some delegations called for the inclusion of countries whose economies were highly dependent on the production, exportation and consumption of fossil fuel, as well as countries heavily dependent on energy intensive industry in the category of countries under special situations.

2. Oral reports on Working Group II

88. When Working Group II began its deliberations, it set a number of objectives:

(a) To review all areas within its mandate;

(b) To consider concepts and functions related to mechanisms;

(c) To identify options and possibly choose some; and

(d) To produce some draft language.

The Co-Chairmen reported progress on all four issues.

89. The focus of the discussions was the Co-Chairs' Single Text. It proved to be a useful tool in exploring concepts and ideas and eliciting proposals from delegations for the formulation of possible draft articles. Throughout the discussions, Working Group II was conscious of the efforts underway in Working Group I. The results of its work on mechanisms would, in many cases, have to await finalization until the nature and extent of the commitments became clearer; but it was also recognized that some of the discussions, for example on scientific cooperation, touched on general obligations or commitments; therefore the results would have to be referred to Working Group I.

Science Mechanisms (Decision 1/1, annex, para.7(b))

90. The discussion of the science mechanisms began from a common starting point: the fact that science was fundamental to the Convention. There was strong support for scientific cooperation, although this section of the Single Text required some restructuring. In addition, there was widespread endorsement of the need for an article on education, training and public awareness, as well as emphasis on the need to include the social sciences, particularly socio- economics, to properly address the technological and development components of the science section. There were also some differences of view. The principal one related to the character of the provisions related to exchange of information. In addition, there was need to distinguish between scientific information and other types of information, for example those associated with reporting requirements.

91. Delegations were keenly interested in the draft articles and Annex on research and systematic observation. There was a general view that the relevant article should identify the reason for doing research and observation, explain how it was to be done and, very briefly, provide a summary of what should be done. There was broad acceptance of the view that the details would be best placed in the Annexes, leaving more substantive points for the articles. There was also a general discussion of the function of scientific assessment. While some questioned the need for a committee dealing with such a function, others stressed the importance of this function for the Convention.

Institutions (including Verification and Compliance, Dispute Settlement and Final Clauses) (Decision 1/1, annex, para.7(a))

92. The discussion of 7(a) falls into four distinct components: institutions, verification and compliance, settlement of disputes and final clauses.

93. There was unanimous acceptance of the need for a Conference of the Parties and a Secretariat and that the former should be the supreme decision-making body of the Convention. There was considerable support for a strong and independent secretariat. There was, however, some divergence of views on some of the functions of the secretariat. Several delegations also proposed the establishment of an Executive Committee with extensive authority under the Convention.

94. There was a very useful, albeit preliminary, discussion of verification and compliance, or review, mechanisms focusing on functions and not on draft text. The Co-Chairmen will translate the views expressed into draft articles, including alternative approaches. Final decisions on these alternatives will, however, be dependent on the outcome of Working Group I's deliberations. Many delegations strongly supported the concept of verification or review to promote compliance with the Convention. There were others who rejected the proposal as premature or as an infringement on national sovereignty. A range of views were expressed on the concept of reporting. The need for differentiated reporting between developed and developing countries was mentioned, as was the need to provide financial resources to developing countries to enable them to prepare any reports.

95. The Working Group also reviewed three options for dispute settlement provisions, although a decision on which option was most appropriate would depend on the nature of the agreed obligations. The importance of the linkages between dispute settlement and compliance and complaints mechanisms was also highlighted.

96. Finally, the Working Group discussed in some detail the concepts and language surrounding the possible final clauses of the Convention. There would be a need to consider carefully how the many references to Protocols throughout the Co-Chairs' text should be treated. Four options for triggering entry into force were identified.

Financial and Technology Transfer Mechanisms (Decision 1/1, annex, para.7(c))

97. With regard to financial resources, the Working Group had a good preliminary discussion which focused on mechanisms that would be employed to implement the commitments established in Working Group I. Two distinct options emerged. A first option would see the establishment of a separate financial mechanism under the authority of the Conference of the Parties, and possibly managed by an Executive Committee. An alternative option would be to make use of the existing World Bank/UNEP/UNDP Global Environment Facility, with amendments to its governance arrangements. Despite these two distinct approaches, there was general agreement that the Convention's Conference of the Parties should provide the necessary policy direction. In addition, many delegations supported the concept of a clearing house, although there were different views on its functions and whether it would be within, or separate from, the financial mechanism. There was also considerable interest in the proposed insurance scheme.

98. There was widespread agreement concerning the importance of a technology transfer or cooperation mechanism, under the control of the Conference of the Parties and linked to obligations. Several delegations advocated a close linkage between, or an integration of, the financial and technology transfer mechanisms. The concept of a technology clearing house was also endorsed by many delegations. Finally, many delegations referred to country studies as potentially contributing to the identification of technology needs.

3. Statements by delegations

99. Following these presentations, the Chairman, on behalf of the Committee, expressed appreciation for the progress made by the Working Groups in their deliberations.

100. Referring to the new documents to be prepared by the respective Co-Chairmen, several delegations recalled the normal rules and practices of the United Nations with respect to the timely distribution of documents in the official languages and expressed the hope that, without prejudice to those rules, the new documents would be distributed in each language as soon as available and as early as possible before the fourth session.

IV. REVIEW OF EXTRABUDGETARY FUNDS

A. Special voluntary fund to support the participation of developing countries

101. At the 3rd plenary meeting, on 13 September, the Executive Secretary reported on recent changes in the status of contributions to the special voluntary fund; these are recorded in document A/AC.237/11 and Corr.1. He drew attention to contributions forthcoming from UNDP and WMO, as well as the offer of the Executive Director of UNEP to consider providing bridging finance. Arrangements made for financing participation in the present session of the Committee, along the lines endorsed at the second session, had been utilized by some 80 developing countries. The Executive Secretary expressed thanks to the contributors to the fund, and to UNDP field offices which continued to be the main channels for issuing tickets and subsistence allowances to funded delegates.

102. The Executive Secretary reported that the expected balance in the fund, after expenditures for the first three sessions, was estimated at $US 370,000, provided that outstanding pledges were paid in. This balance, together with the contribution of $100,000 from UNDP, appeared to assure the capacity of the fund to finance participation in the fourth session of the Committee. The Executive Secretary hoped that the target of financing 100 delegates could be achieved for that session.

103. With regard to the pre-session seminars and training activities, amounts to be transferred from the Japanese Trust Fund for International Cooperation for Development were estimated at $US 110,000 for the second and third sessions of INC. The balance of the contribution from that Trust Fund should cover the cost of training activities prior to the fourth session; these would be conducted in the French language.

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30 October 1991
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INTERGOVERNMENTAL NEGOTIATING COMMITTEE
FOR A FRAMEWORK CONVENTION ON CLIMATE CHANGE
Fourth session
Geneva, 9-20 December 1991
Item 2(b) of the provisional agenda

REVISED SINGLE TEXT ON ELEMENTS RELATING TO MECHANISMS

A/AC.237/Misc.13
GE.91-62699

Note by the Co-Chairs of Working Group II

1. On the basis of the Working Group's discussion in Nairobi, the Co-Chairs have extensively refined the material in our Single Text (A/AC.237/Misc.8) in order to encourage a focused and productive discussion in December. We have attempted to provide delegations with as clear and as clean a text as possible, although where appropriate we have continued to set out options for consideration by the Working Group. Much of the language will already be familiar to delegations, although we have tightened it wherever possible. At the same time, where your Co-Chairs jointly believe that the discussions in Nairobi broke new ground, we have not shied away from building on the views expressed to produce text which reflects these new ideas. We have also consulted and drawn upon the useful work of the Bureau of Working Group I in finalizing this text.

2. Our goal throughout the redrafting exercise has been to develop mechanisms that are both supportive of, and help to effectively implement, the objectives of the Convention. Our approach has continued to be "result-oriented", i.e. first asking ourselves what needs to be done and then, based on views expressed by delegations, designing the mechanisms to achieve the desired purpose. The more we worked on the revised text, the more your Co-Chairs came to the conclusion that certain traditional approaches were inadequate to address the global nature of climate change. This text reflects that conclusion but in a manner which we hope delegations will find to be reasoned and appropriate.

3. Even more than in the Single Text for our Nairobi discussions, we have relied extensively on introductory notes to clarify why we have considered certain options or approaches to put before delegations. We believe that the use of these notes in the earlier text helped delegations, and ourselves, clarify our objectives. In most cases we have been able to supplement the notes with specific text for consideration. Alternatively, we have used the notes to pose any questions that remain outstanding or to draw the attention of delegates to specific options, and the implications of those options.

4. As our detailed views are contained in the notes that precede specific articles, we will limit ourselves to a few more general observations in this introductory section. First, as will be readily apparent, the mechanism structure places a heavy reliance on the Conference of the Parties for all political and policy decisions. This, we believe, is a true reflection of the sentiment of delegations in Nairobi. Second, we tried to produce an implementation/interpretation process that is supportive and non-adversarial but at the same time effective. This has perhaps been our most difficult task but we believe the proposal contained in Article 10 is coherent, consistent and will be effective in practice. Third, as delegations will note, we have opted to propose an "administrative mechanism" to implement the financial resources and technology transfer programs related to the Convention. We have done this, in large part, to reserve the policy direction and operational guidance aspects of these issues for the Conference of the Parties. Finally, where there is both an article and an annex, we have followed the practice we began in Nairobi of including only the essential items in the article and leaving as many details as possible for the annex.

REVISED SINGLE TEXT ON ELEMENTS RELATING TO MECHANISMS

CONTENTS

A. Texts related to "Legal and institutional mechanism related to scientific cooperation, monitoring and information" (Decision 1/1, paragraph 7 (b));

	Paragraphs	Pages
Article 1 Scientific Technological and Technical Cooperation	1-3	6
Article 2 Research and Development and Systematic Observation	1-4	7
Article 3 Exchange of Information	1	8
Article 4 Education, Training and Public Awareness	1-3	9

B. Texts related to "Legal and institutional mechanisms, including, inter alia, entry into force, withdrawal, compliance and assessment and review" (Decision 1/1, paragraph 7 (a)).

Note by the Co-Chairs of Working Group II (Institutions)		10-11
Proposed Organization Chart		12
Article 5 Conference of the Parties	1-7	13-16
Note by the Co-Chairs of Working Group II (Secretariat)		17
Article 6 Secretariat	1-3	18-19
Note by the Co-Chairs of Working Group II (Advisory Committee on Science)		20
Article 7 Advisory Committee on Science	1-8	21-23
Note by the Co-Chairs of Working Group II (Advisory Committee on Implementation)		24

	Paragraphs	Pages
Article 8 Advisory Committee on Implementation	1-7	25-26
Note by the Co-Chairs of Working Group II (Reporting)		27
Article 9 Reporting	1-6	28-29
Note by the Co-Chairs of Working Group II (Resolution of Questions regarding Interpretation and Implementation of the Convention and Settlement of Disputes)		30-31
"Resolution of Questions" Chart		32
Article 10 (Alternative A) Resolution of Questions Regarding Interpretation and Implementation of the Convention	1-4	33-34
Settlement of Disputes Chart Model 1 Model 2		35 36
Article 10 (Alternative B) Settlement of Disputes	1-10	37-39
Article 11 Amendments to the Convention	1-6	40-41
Article 12 Protocols	1-5	42
Article 13 Adoption and Amendment of Annexes to the Convention	1-5	43
Article 14 Right to Vote	1-2	44
Article 15 Depositary		45
Article 16 Signature		46
Article 17 Ratification, Acceptance, Approval and Accession	1-3	47

	Paragraphs	Pages
Article 18 Entry into Force	1-3	48-49
Article 19 Reservations and Declarations	1-2	50
Article 20 Withdrawal	1-3	51
Article 21 Authentic Texts		52

C. **Texts related to "Legal and institutional mechanisms related to adequate and additional financial resources and technological needs and cooperation, and technology transfer to developing countries corresponding to the commitments agreed to in Working Group I" (Decision 1/1, paragraph 7 (c))**

Note by the Co-Chairs of Working Group II (Administrative Mechanism for Financial Resources and Technology Transfer		53-54
Article 22 Administrative Mechanism for Financial Resources and Technology Transfer	1-2	55-56
Note by the Co-Chairs of Working Group II (Insurance)		57
Article 23 Insurance		58
Annex I Research and Development and Systematic Observation	1-2	59-67
Annex II Exchange of Information	1-3	68-69
Annex III Reporting	1-3	70-71
Annex IV Arbitration		72-75

A. **Texts related to "Legal and institutional mechanisms related to scientific cooperation, monitoring and information". (Decision 1/1, paragraph 7(b)).**

Article 1 *

SCIENTIFIC, TECHNOLOGICAL AND TECHNICAL COOPERATION

Cooperation

1. The Parties shall cooperate in the development and dissemination of scientific, technological, technical, socio-economic and legal knowledge relevant to climate change, and the potential responses thereto, through research and development and systematic observation, exchange of information and education, training and public awareness.

Developing countries

2. The Parties shall take into account the particular concerns and needs of developing countries and seek to promote the capacity and capability of all Parties to participate in these cooperative efforts.

Minimize duplication

3. The Parties shall also seek to minimize duplication of effort by utilizing, where possible, existing competent international and intergovernmental bodies.

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* Articles are numbered consecutively solely for the purposes of the work of Working Group II. This of course will be revised once the text of the entire Convention is completed. Similarly, sub-headings are provided to facilitate the work of the Working Group.

Article 2

RESEARCH AND DEVELOPMENT AND SYSTEMATIC OBSERVATION*

Cooperation

1. The Parties shall undertake to initiate and cooperate in, directly or through competent international and intergovernmental bodies, the conduct of research and development and systematic observation related to the climate system and climate change as elaborated in Annex I.

National jurisdiction

2. Within areas under its jurisdiction, each Party shall undertake research and development and systematic observation.

Beyond national jurisdiction

3. In areas beyond national jurisdiction, the Parties shall encourage cooperation in research and development and systematic observation, taking into account relevant laws and activities at both the national and international levels. Special measures shall be implemented to promote equal access to data obtained from these areas.

Strengthen networks and capacity

4. The Parties shall support international and inter-governmental efforts to strengthen the observational networks and data collection and research capacities, particularly in developing countries.

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* See Annex I on "Research and Development and Systematic Observation" which can be found at the end of this document.

Article 3

EXCHANGE OF INFORMATION*

1. In order to achieve the objective of the Convention, the Parties shall facilitate and encourage, directly or through competent international and intergovernmental organizations, full, open and timely exchange of relevant scientific, technological, technical, socio-economic and legal information as described in Annex II.

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* See Annex II on "Exchange of Information" which can be found at the end of this document.

Article 4
EDUCATION, TRAINING AND PUBLIC AWARENESS

Promotion

1. In order to increase the understanding of climate change and to facilitate appropriate responses, the Parties shall promote education, training and public awareness related to climate change.

National

2. At the national level and in accordance with the means at their disposal, the Parties shall promote and facilitate:

(a) the development and implementation of public awareness and education programmes on climate change;

(b) public access to information on climate change;

(c) public participation in addressing climate change issues and developing appropriate responses; and

(d) appropriate training of scientific, technical and managerial personnel.

International

3. At the international level, using existing organizations, institutions and channels where appropriate, the Parties shall cooperate in and promote:

(a) the development and exchange of public awareness and educational material on climate change; and

(b) the development and implementation of education and training programmes, including the exchange or secondment of personnel, in particular for developing countries.

B. Texts related to "Legal and institutional mechanisms, including, inter alia, entry into force, withdrawal, compliance and assessment and review" (Decision 1/1, paragraph 7 (a)).

INSTITUTIONS

Note by the Co-Chairs of Working Group II

The institutions established in support of the Convention will constitute an integrated package. They will be crucial to the successful implementation of the Convention. We believe it would be useful at this stage to present an overall picture of the proposed institutional framework in order to determine whether the structure and mandates are appropriate.

It is our judgement that the following institutional framework would meet the requirements of this Convention while respecting the views expressed by the Working Group in Nairobi. We have also summarized the key characteristics or functions of each body. A proposed organizational chart is attached.

Conference of the Parties

- *the body that would provide policy direction to all subsidiary bodies and make all political decisions.*

- *a bureau would oversee its activities*

Advisory Committee on Science

- *an expert body to advise the Conference of the Parties on the state of scientific knowledge and respond to questions referred to it.*

Advisory Committee on Implementation

- *a cooperative, technical body to advise and consult with Parties on measures to implement their obligations under the Convention and to report to the Conference of the Parties on the cumulative effect of such measures by all Parties in meeting the objectives of the Convention.*

Financial Administrative Mechanism

- *the body established or designated to administer the financial resources and technology transfer mechanism.*

Ad hoc Panels Regarding Questions of Interpretation and Implementation

- *ad hoc panels to consider and consult on questions raised by a Party/Parties or a subsidiary body relating to the interpretation and implementation of the Convention and to report to the Conference of the Parties;*

- *ad hoc panels of legal experts to give advisory opinions to the Conference of the Parties.*

Secretariat

- *a substantial, professional body to service the Conference of the Parties and its subsidiary bodies.*

There are two other issues related to institutions that we would like to address - the matter of an "executive committee" and how we have dealt with verification and compliance.

Executive committee

The term "Executive Committee" has been used in a variety of ways. For example, it could mean:

1. *An expanded Bureau of the Conference of the Parties; or*

2. *a permanent, standing body open to all Parties.*

Although we did recieve proposals for an "Executive Committee" from several countries, we were unable to have a full airing of views on this subject in Nairobi. As we have proposed that the Conference of the Parties meet more frequently than is normally the case for such bodies (i.e. annually) and as we have also proposed a bureau to manage the operations of the Convention between meetings of the Conference of Parties, we felt that a permanent standing body open to all Parties would not be needed. However, we have provided the Conference of the Parties with the authority to create such a body if at some time in the future it should so decide.

Verification and Compliance

We believe that "verification and compliance" should be looked at as a process and not institutionalized in a single mechanism. The process as elaborated in the articles which follow includes the following elements:

- *reporting by the Parties on the measures taken to implement their obligations under the Convention (Article 9 on Reporting);*

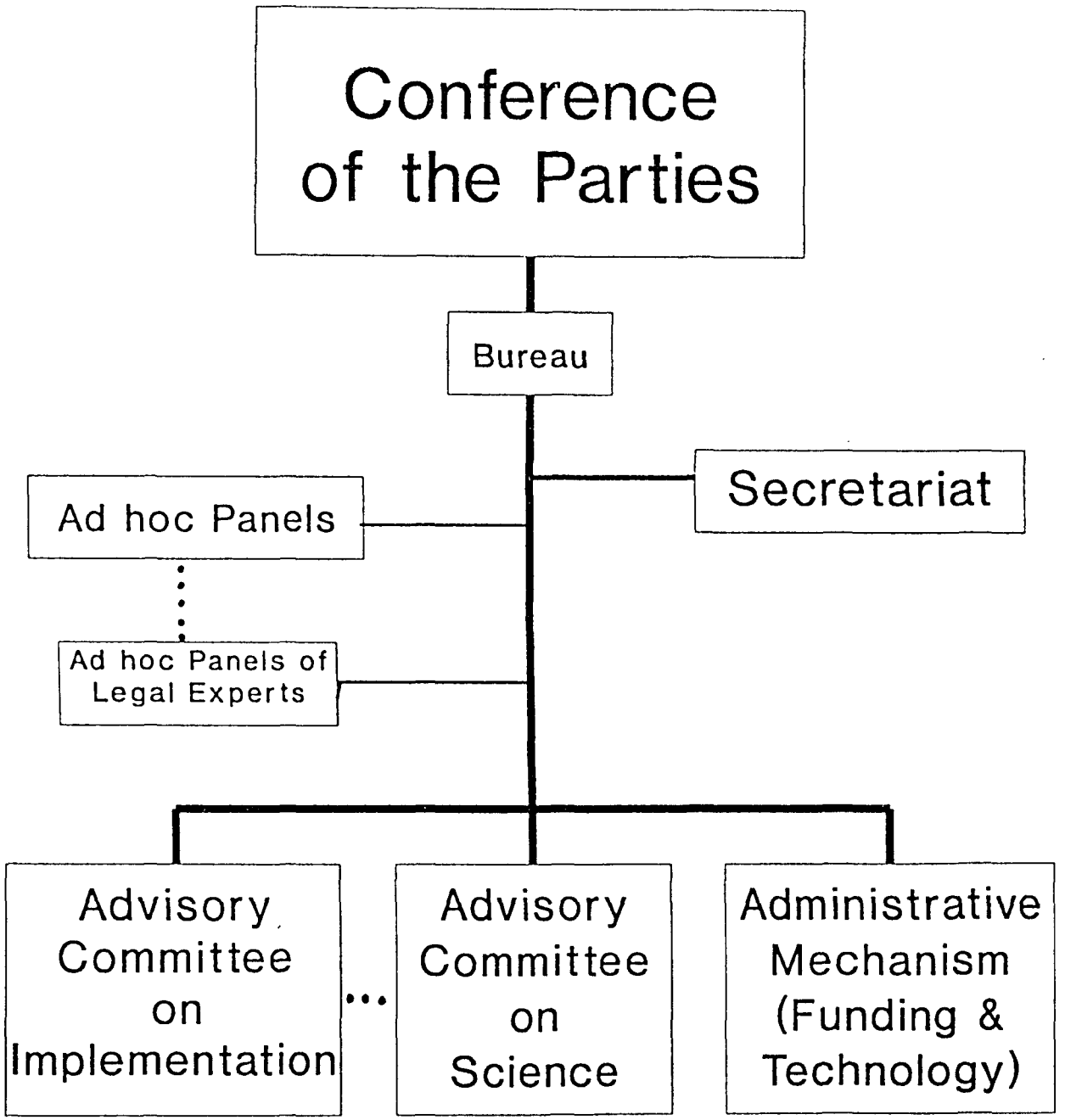
- *assistance to the Parties to enable them to be in compliance with the Convention (Articles 9 on Reporting and 10 (Alternative B) on Resolution of Questions regarding Interpretation and Implementation of the Convention);*

- *review of reports and other relevant information to identify requirements for assistance and, if necessary, the need for consideration by the Conference of the Parties (Article 8 on Advisory Committee on Implementation);*

- *procedures to allow Parties or subsidiary bodies to raise questions regarding interpretation or implementation of the Convention (Article 10 (Alternative A) on Resolution of Questions);*

- *all decisions regarding compliance would be the prerogative of the Conference of the Parties (Articles 5 on Conference of the Parties, 8 on Advisory Committee on Implementation, and 10 (Alternative A) on Resolution of Questions);*

PROPOSED ORGANIZATION CHART



Article 5

CONFERENCE OF THE PARTIES

Establishment

1. A Conference of the Parties is hereby established. All other bodies established under the Convention are subsidiary to the Conference of the Parties.

Functions

2. The Conference of the Parties shall keep under continuous review the implementation of this Convention and its protocols and make the decisions necessary to ensure the effective operation of the Convention. To this end, it shall, inter alia,:

Policy decision-making

(a) review and revise, as necessary, the objectives of the Convention;

(b) assess and review the implementation of the obligations of the Convention [and its protocols] and publish regular reports thereon;

(c) consider the information submitted in accordance with Article 9 (on Reporting) and review the mechanisms and timetables for its transmission;

(d) consider reports from subsidiary bodies and take such actions as it deems necessary;

Administrative mechanism

(e) provide policy direction and operational guidelines to the administrative mechanism for financial resources and technology transfer;

(f) [establish criteria under which the administrative mechanism for financial resources and technology transfer will develop "global accounting credit standards" for contributions of technology];

(g) [(if not set out in the Convention) establish limits on the amount of bilateral assistance that a country can claim under "global accounting" procedures];

(h) evaluate the effectiveness of the administrative mechanism for financial resources and technology transfer with a view to making any recommendations required;

Questions relating to interpretation and implementation

(i) consider and decide upon questions of interpretation and implementation of the Convention raised by Parties or by its subsidiary bodies;

(j) appoint, as necessary, from among its members ad hoc panels to consider and report on questions of interpretation and implementation of the Convention;

(k) appoint, as necessary, ad hoc panels of legal experts to provide advisory opinions on questions of interpretation and implementation of the Convention;

Other functions

(l) seek the services and cooperation of, and utilize the information provided by, competent international and intergovernmental bodies;

(m) periodically review relevant scientific, environmental, technological, technical, legal and socio-economic information;

(n) promote the coordination or harmonization of policies, strategies and measures to address climate change, taking into account the differing circumstances of Parties to the Convention;

(o) seek to mobilize financial resources with a view to ensuring the full implementation of the obligations under the Convention;

(p) consider and recommend programmes for research and development and systematic observation, exchange of information, education, training and public awareness, and scientific, technological and technical cooperation;

(q) establish such subsidiary bodies, including any body to coordinate its activities when it is not in session, as are deemed necessary for the implementation of this Convention;

(r) agree upon and adopt its rules of procedure and any amendments thereto, by consensus;

(s) consider and decide upon financial and budgetary matters of this Convention including the financial rules and provisions governing its operation, that of its subsidiary bodies and the secretariat;

(t) consider and adopt, as may be agreed upon, in accordance with the relevant articles, amendments to this Convention, additional annexes and amendments of annexes to this Convention;

(u) consider, in accordance with the relevant articles, any protocol to this Convention, as well as any amendment to such protocol, additional annexes and amendments of annexes to any protocol, and, if so decided, recommend their adoption to the Parties to the protocol concerned; and

(v) exercise such other functions and powers as are conferred on it by this Convention or are required for the achievement of its purposes.

Decisions by the Conference of the Parties

4. The Parties shall make every effort to take its decisions under the Convention by consensus. If all efforts at consensus have been exhausted, decisions shall, as a last resort, be taken by a two thirds majority vote of the Parties present and voting.

Meetings

5. The first meeting of the Parties of the Conference of the Parties shall be convened [insert name of the secretariat designated on an interim basis under the Article on the Secretariat] not later than one year after entry into force of this Convention. Thereafter, ordinary meetings of the Conference of the Parties shall be held annually unless otherwise decided by the Conference.

6. Extraordinary meetings of the Conference of the Parties shall be held at such other times as may be deemed necessary by the Conference, or at the written request of any Party, provided that, within [three] [six] months of the request being communicated to the Parties by the secretariat, it is supported by at least [one-third] [one-half] of the Parties.

Observers

7. The United Nations, its specialized agencies and the International Atomic Energy Agency, as well as any State not Party to this Convention, may be represented at meetings of the Conference of the Parties as observers. Any other body or agency, whether national or international, governmental or non-governmental, competent in matters covered by the Convention which has informed the secretariat of its wish to be represented at a meeting of the Conference of the Parties as an observer may be admitted unless at least one-third of the Parties present object. The admission and participation of observers shall be subject to the rules of procedure adopted by the Conference of the Parties.

SECRETARIAT

Note by the Co-Chairs of Working Group II

The Working Group will need to consider the following questions:

- *should a permanent secretariat be established or designated in the Convention?*

OR

- *should an interim secretariat be designated in the Convention with the provision that the Conference of the Parties would decide on the permanent secretariat at its first meeting?*

With regard to both of the options, we will also need to consider whether a new secretariat should be established or whether the functions should be carried out by an existing body or bodies.

In addition, the Working Group might wish to consider whether provision should be made for secretariat work (by an existing body) in the period between signature and entry into force of the Convention.

Article 6

SECRETARIAT

[Establishment

1. A secretariat is hereby established to service the Conference of the Parties and its subsidiary bodies.]

Functions

2. The functions of the secretariat shall be:

(a) to arrange for and service meetings provided for in the Articles 5, 7, 8, 10, 11, 12 and 13 (on Conference of the Parties, Advisory Committees, Resolution of Questions, Amendment to the Convention, Protocols and Adoption and Amendment of Annexes);

(b) to prepare and transmit reports based upon information received in accordance with Articles 3 and 9 (on Exchange of Information and Reporting), as well as upon information derived from meetings of subsidiary bodies;

(c) to prepare reports on its activities carried out in the implementation of its functions under the Convention and present them to the Conference of the Parties;

(d) to ensure the necessary coordination with other relevant bodies and in particular to enter into such administrative and contractual arrangements as may be required for the effective discharge of its functions;

(e) to perform the functions assigned to it by any protocol to the Convention; and

(f) to perform such other functions as may be determined by the Conference of the Parties.

[(Designation of interim secretariat

3. The secretariat functions will be carried out on an interim basis [by the ad hoc secretariat established under Resolution 45/212 of the General Assembly of the United Nations] [by the United Nations Environment Programme and the World Meteorological Organization] until the completion of the first ordinary meeting of the Conference of the Parties held pursuant to Article 5 on the Conference of the Parties. At its first ordinary meeting, the Conference of the Parties shall establish or designate a secretariat.]

ADVISORY COMMITTEE ON SCIENCE

Note by the Co-Chairs of Working Group II

We have refined the segment of the Single Text relating to the proposed Scientific Assessment Committee to reflect, to the extent possible, the Working Group's discussion of this subject in Nairobi. We would draw your attention to the following key points:

- *we have renamed the Committee the Advisory Committee on Science and moved it to the section on "institutions";*

- *the Committee would be subsidiary to the Conference of the Parties;*

- *it would provide scientific assessments to the Conference of the Parties and respond to their requests;*

- *it would draw upon the expertise, and not duplicate the activities, of other international and intergovernmental bodies (such as UNEP, WMO, IPCC, UNDP, WHO, FAO, etc.);*

- *it would be composed of experts serving in their individual capacities but elected by the Conference of the Parties; and*

- *it would have a multidisciplinary membership with expertise in the natural, technological, social and economic sciences.*

Article 7

ADVISORY COMMITTEE ON SCIENCE

Establishment

1. An Advisory Committee on Science is hereby established.

Functions

2. The Advisory Committee on Science shall have an advisory and consultative role and shall perform the following functions, making use, to the greatest extent possible, of competent international and intergovernmental bodies:

(a) to provide regular assessments to the Conference of the Parties on the state of knowledge in the fields of natural, technological, social and economic sciences pertaining to climate change and responses to climate change;

(b) to provide regular assessments to the Conference of the Parties on the adequacy of, and priorities for, research and development and systematic observation undertaken in support of the Convention and Annex I and to make recommendations thereon;

(c) to respond to questions and any other matters referred to it by the Conference of the Parties or any body subsidiary to the Conference of the Parties;

(d) to provide scientific and technical advice to the Parties, upon request, in fulfilling their reporting requirements;

(e) to seek the assistance, advice and services of competent international bodies and scientific committees;

(f) to review research, assessments and other information relevant to the purposes of the Convention whether conducted by Parties, non-Parties or other national, international, governmental or non-governmental bodies or agencies;

(g) to have access to the relevant scientific and technical information provided by the Parties pursuant to Article 9 on Reporting and to furnish opinions and recommendations thereon to the Conference of the Parties;

(h) to identify on its own initiative matters within its mandate that need to be addressed and to report and make recommendations thereon to the Conference of the Parties;

(i) to establish such subsidiary bodies, subject to the approval of the Conference of the Parties, as it may deem necessary to assist in the performance of its functions; and

(j) to perform any other function assigned to it by the Conference of the Parties or under any protocol to the Convention.

Membership

3. The Advisory Committee on Science shall have fifteen members, who are experts in natural, technological, social and economic sciences. They shall be elected by the Conference of the Parties, with due regard to the principle of equitable representation, and shall serve in their individual capacities. Each member shall be elected for an initial term of four years and may serve additional terms subject to the procedure set forth above.

Meetings

4. Unless the Conference of the Parties decides otherwise, the Advisory Committee on Science shall be convened within six months after the first meeting of the Conference of the Parties. Thereafter, unless it or the Conference of the Parties decide otherwise, the Committee shall meet at least annually.

Election of Officers

5. The Advisory Committee on Science shall elect from among its members a chair, two vice-chairs and a rapporteur each to serve for a term of two years, and who may, be re-elected to serve additional terms.

Rules of procedure

6. The Advisory Committee on Science shall agree upon and adopt its rules of procedure, and any amendments thereto, by consensus.

Observers

7. The meetings of the Advisory Committee on Science shall be open to observers designated by any Party.

8. The Advisory Committee on Science may invite, as necessary appropriate experts to participate in or observe its meetings.

ADVISORY COMMITTEE ON IMPLEMENTATION

Note by the Co-Chairs of Working Group II

In accordance with our discussions in Nairobi, we have revised the proposed "Implementation Committee" as follows:

- *the name has been changed to Advisory Committee on Implementation;*

- *the Committee is identified clearly as subsidiary to the Conference of the Parties, with the latter being the only forum where decisions of a political or policy nature would be taken; and*

- *we have reinforced the Committee's technical, cooperative and consultative character.*

We share the view expressed by many delegations that the function of reviewing the implementation of obligations and the cumulative effect of such actions in meeting the objective of the Convention is vital to the long term effectiveness of the agreement. While any decisions in this regard would be the prerogative of the Conference of the Parties, we do not believe that the Conference of the Parties, given its heavy agenda and infrequent meetings, would be able to perform this function without the assistance and advice of the Advisory Committee on Implementation.

Article 8

ADVISORY COMMITTEE ON IMPLEMENTATION

Establishment

1. An Advisory Committee on Implementation is hereby established.

Functions

2. The Committee shall review the progress by the Parties in implementing all their obligations and actions under the Convention. It shall provide information and advice to the Parties on the development and implementation of national strategies to meet these obligations and on the fulfilment of the reporting requirements under the Convention. To this end, the Committee shall:

(a) advise individual Parties, at their request, on the ways and means of meeting the reporting requirements set forth in Article 9 and Annex III, including the development of national climate change strategies, devising and implementing new or additional response measures and identifying national programmes that require financial and technological resources;

(b) review and consult with individual Parties on the report submitted by those Parties in accordance with Article 9 and request, as necessary, additional information or clarification thereon;

(c) report and make recommendations, as appropriate, to the Conference of the Parties on the overall implementation of the obligations and the extent to which the cumulative effect of the actions to implement the Convention's obligations meets the objective of the Convention;

(d) identify to the Conference of the Parties those Parties that have not submitted reports in accordance with the provisions of Article 9;

(e) seek, receive and consider information from competent international and intergovernmental bodies and accredited non-governmental organizations; and

(f) consult with, and seek the advice of, the Advisory Committee on Science, as necessary.

Membership

3. The Committee shall have fifteen members, who are experts on matters related to climate change. Members shall be elected by the Conference of the Parties with due regard to the principle of equitable representation: Each member shall be elected for a term of four years and may be re-elected to serve additional terms subject to the procedure set forth in this paragraph.

Meetings

4. The first meeting of the Committee shall be convened not more than six months after the first meeting of the Conference of the Parties. Unless the Conference of the Parties decides otherwise, subsequent meetings shall be convened at least biannually.

Election of Officers

5. The Committee shall elect from among its members, a chair and two vice-chairs and a rapporteur, each to serve for a term of two years, and who may, subject to re-election, serve additional terms.

Rules of procedure

6. The Committee shall agree upon and adopt its rules of procedure and any amendments thereto, by consensus.

REPORTING

Note by the Co-Chairs of Working Group II

Strong support for the concept of reporting was evident during our discussion in Nairobi. This was seen as a means to facilitate and promote compliance with the obligations under the Convention and to assist countries in developing national climate change strategies. Reporting purely for the sake of reporting would not be desirable. Consequently, we would see information such as national climate change strategies, measures taken to implement obligations, and emissions inventories as appropriate examples for reporting.

There was a strong consensus that the Parties have an obligation to report. The manner in which such reports would be prepared should be determined by the individual country. As several delegations pointed out, this would not preclude Parties from designating a national body to help prepare their reports.

In the absence of consensus on matters such as the frequency and content of reporting, but drawing on the discussion in Nairobi, we have developed some proposals in the following draft Article and in Annex III. We would very much welcome your suggestions for improvements or alternative approaches.

We would underline three additional points:

- *the proposed reporting requirements for developed and developing countries would be differentiated as a result of their differentiated obligations and in terms of timing;*

- *the Advisory Committee on Implementation would have as one of its principal functions the provision of assistance, to those Parties requesting it, in the preparation of reports and development of the related national strategies; and*

- *the proposal builds in safeguards for confidientiality of information.*

Article 9

REPORTING

Submission of reports

1. Each Party shall submit to the secretariat a report on the measures it has undertaken to implement its obligations under the Convention as well as on any other actions it deems relevant, in accordance with the provisions set forth in Annex III to this Convention.

First report

2. For developed country Parties, the first report shall be submitted within one year of the entry into force of the Convention or within one year of ratification, acceptance, approval or accession to the Convention. For developing country Parties, the first report shall be submitted within two years of the entry into force of the Convention or within two years of ratification, acceptance, approval of, or accession to the Convention.

Regional/group reporting

3. A group of Parties may, subject to the prior notification of the Advisory Committee on Implementation, submit a single report in fulfilment of their obligation under paragraph 1 above.

Transmittal to Conference of the Parties

4. The secretariat shall transmit the reports submitted by the Parties to the Conference of the Parties, except as provided for in paragraph 6 below.

Transmittal to Advisory Committee on Implementation

5. The secretariat shall transmit the reports submitted by the Parties to the Advisory Committee on Implementation.

Confidential information

6. The secretariat shall ensure that information designated as confidential by the supplying Party and meeting the criteria for confidentiality established in Annex III is not disclosed to other Parties and is aggregated to protect its confidentiality.

RESOLUTION OF QUESTIONS REGARDING INTERPRETATION AND IMPLEMENTATION OF THE CONVENTION AND

SETTLEMENT OF DISPUTES

Note by the Co-Chairs of Working Group II

In reviewing the kinds of mechanisms that may be required to promote compliance with Convention obligations and to resolve questions and disputes we have come to the conclusion that traditional approaches are insufficient. Climate change is a truly global problem. All Parties are affected by the action, or inaction, of all other Parties. Strict reliance on bilateralism whereby one Party raises a complaint or dispute with another Party will not, in our view, meet the needs of a convention on climate change. We have an opportunity to break new ground. In this regard, your Co-Chairs are proposing a new option (Article 10, Alternative B). The options considered in Nairobi are also included (Article 10, Alternative A although we have attempted to streamline and simplify them).

We share the view expressed in Nairobi that the first step in resolving questions must be cooperative. Consequently, we have emphasized procedures to ensure that the initial focus of any question relating to interpretation and implementation of the Convention will be on consultation and cooperation to assist Parties to come into compliance with their obligations.

We must also recognize that ultimately those who have accepted obligations under the Convention have a right to expect that all Parties will meet their obligations. Procedures will therefore be required to give effect to this.

Our proposal has the following key points:

- *pursuant to the discussions in Nairobi, the Conference of the Parties would be the point of entry for any questions and the body responsible for all decisions;*

- *questions relating to the interpretation and implementation of the Convention could be brought to the Conference of the Parties by any Party or Parties or by one of the subsidiary bodies;*

- *such questions would be disposed of in a timely fashion, but dictated by the frequency of meetings of the Conference of Parties;*

- *the Conference of the Parties would consider such questions and could establish an ad hoc panel drawn from the members of the Conference of the Parties;*

- *if the question related to a specific Party, the Party would be invited to attend the meetings of the Panel;*

- *the first step in reviewing any question raised would be consultation with the Party that was the subject of the question with particular reference to the means and mechanisms available under the Convention to assist Parties to implement their*

commitments. The Panel could also consult with any party or subsidiary body;

- *the panel would report the results of its consultations to the Conference of the Parties within one year. This report would include, if necessary, a recommendation for resolution;*

- *the Conference of the Parties would then consider this report and take whatever action it deemed necessary;*

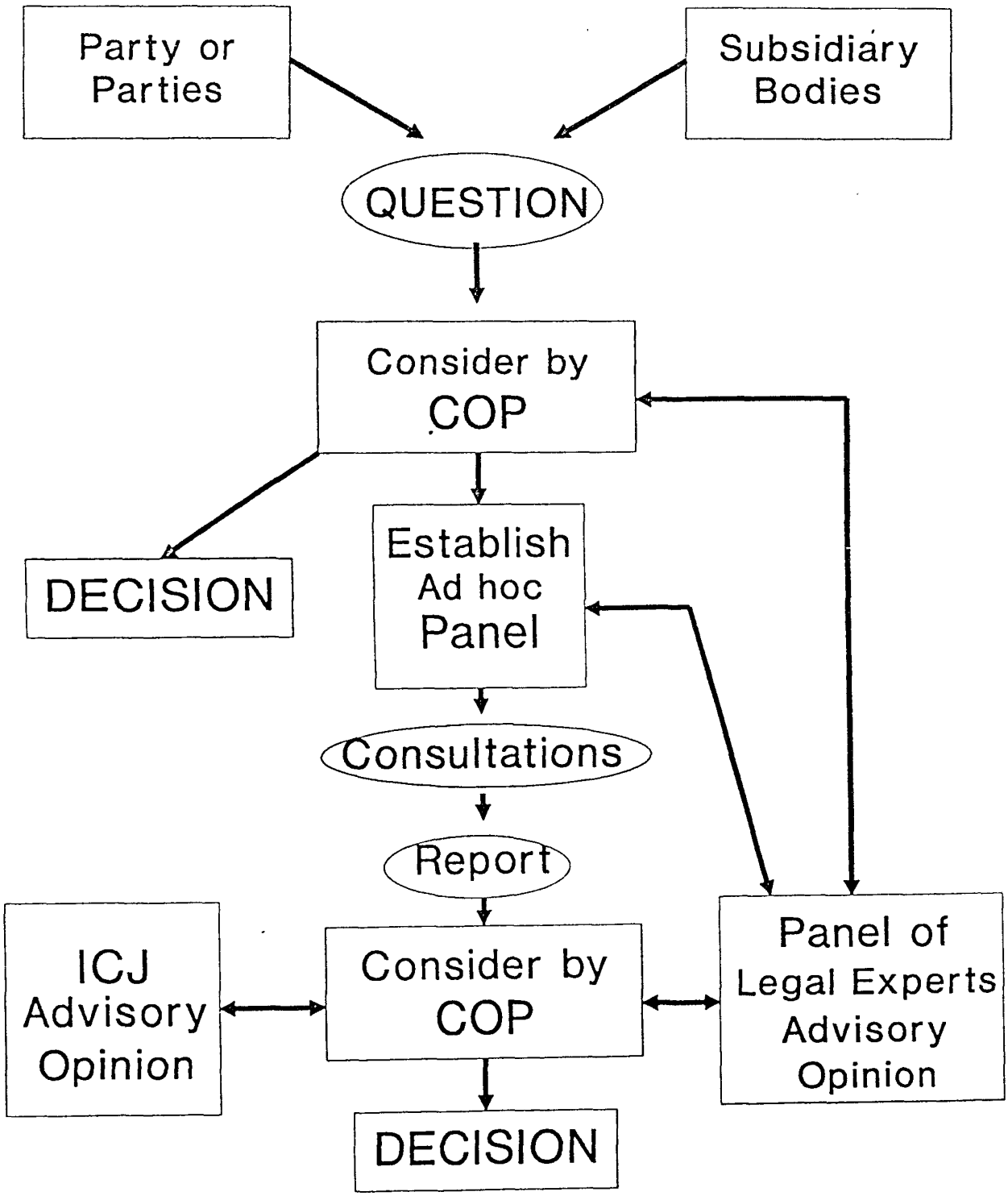
- *as many of the questions would relate to interpretations of the Convention, one of the options open to the Conference of the Parties or the ad hoc Panel would be to seek, at any time in the process, an advisory opinion from a panel of legal experts. The Conference of Parties could also request an advisory opinion from the International Court of Justice;*

- *in the event that the Party that is the subject of the question did not comply with a decision of the Conference of the Parties, the latter could take any action it deemed necessary to further the objectives of the convention;*

- *as decision-making by consensus would not always be a practical option in this procedure, we have proposed decision-making by a two-thirds majority if necessary; and*

- *the details regarding the establishment of ad hoc panels and panels of legal experts would be elaborated in an Annex which could be drafted by the Working Group or by the Conference of the Parties once the Convention enters into force.*

RESOLUTION OF QUESTIONS RE: INTERPRETATION & IMPLEMENTATION



Article 10 (Alternative A)

RESOLUTION OF QUESTIONS REGARDING INTERPRETATION AND IMPLEMENTATION OF THE CONVENTION

Process

1. The Conference of the Parties shall, in a timely fashion, consider and resolve questions regarding the interpretation and implementation of the Convention that are brought to its attention in writing by Parties or by its subsidiary bodies. To this end, it may establish one or more ad hoc Panel(s) of its members, designated in accordance with Annex __ (Annex to be drafted). If questions relate to a specific Party, the ad hoc panel(s) shall invite a representative of the Party that is the subject of the question (hereinafter referred to as the "Party concerned") to attend the meetings of the Panel. In considering the question before the next ordinary meeting of the Conference of the Parties and following the meeting at which the ad hoc Panel was established, the ad hoc Panel shall:

(i) if the question relates to a specific Party, notify in writing the Party concerned that a question regarding its interpretation and implementation of the terms of the Convention has arisen;

(ii) if the question relates to a specific Party, request the Party concerned to respond and take part in consultations with the Panel;

(iii) consult, as it deems necessary, representatives of any Party and other expert bodies;

(iv) request that the Party concerned advise the ad hoc Panel(s) of its capacity to implement fully the provisions that were the subject of the question, the provisions of the Convention as a whole, and of its needs relevant to the implementation of the Convention;

(v) promote, using the means, institutions, and funds available under the Convention, the capacity of the Party concerned to comply with and implement its commitments under the Convention;

(vi) report the results of the consultations to the Conference of the Parties, including, if necessary, a recommendation for resolution of the question.

Consideration of Report

2. At its next ordinary meeting, the Conference of the Parties shall consider the report of an ad hoc Panel and take any course of action it deems necessary to further the objectives of the Convention. In doing so, the Conference of the Parties or an ad hoc Panel may, at any time, seek an advisory opinion from an ad hoc Panel of Legal Experts. The Conference of the Parties may also, if appropriate, request an advisory opinion from the International Court of Justice.

Decisions by Conference of the Parties

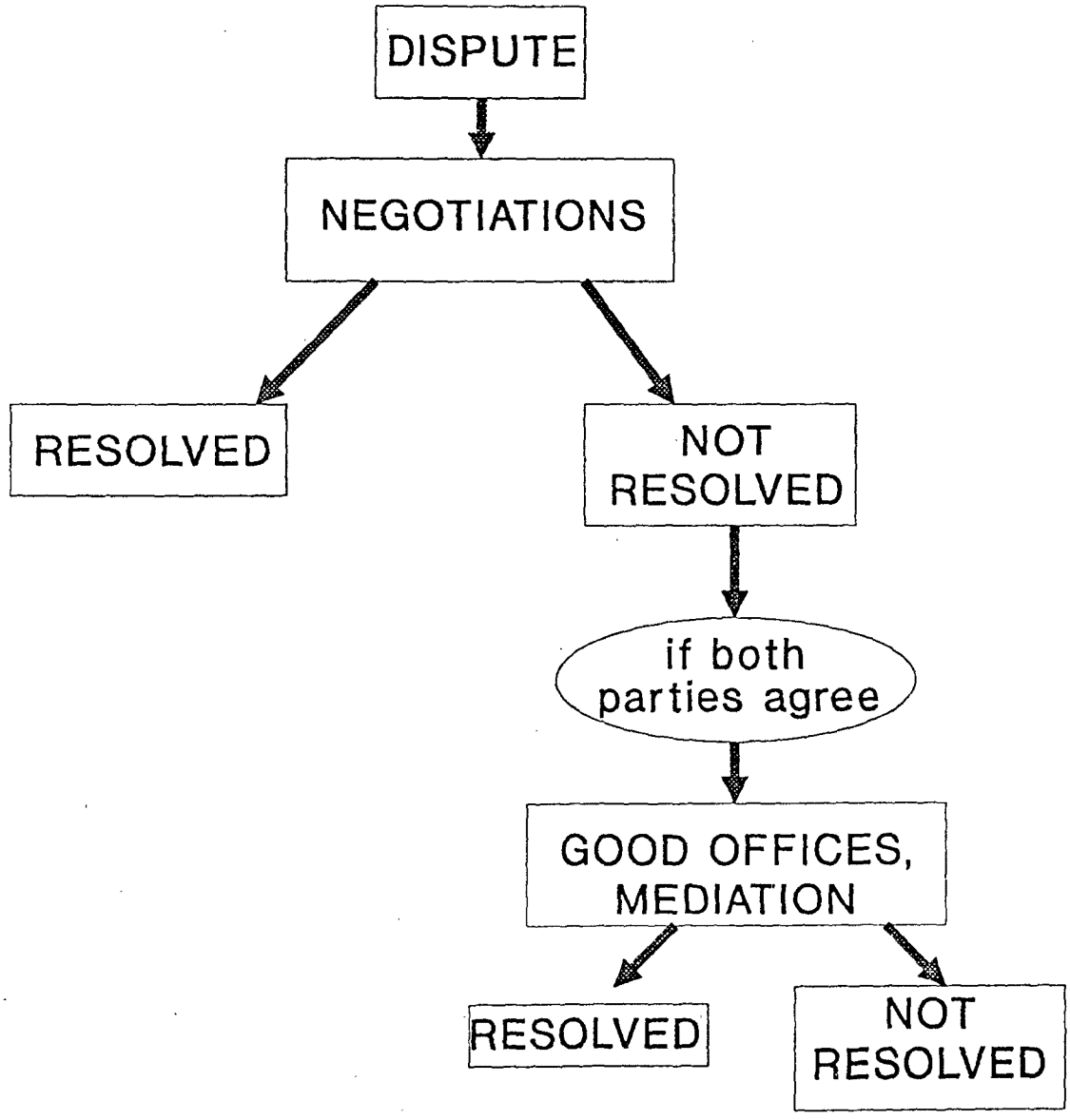
3. If the Party concerned does not comply with the course of action set out by the Conference of the Parties, the Conference of the Parties may, again, take any further action it deems necessary to advance the objectives of the Convention.

Voting

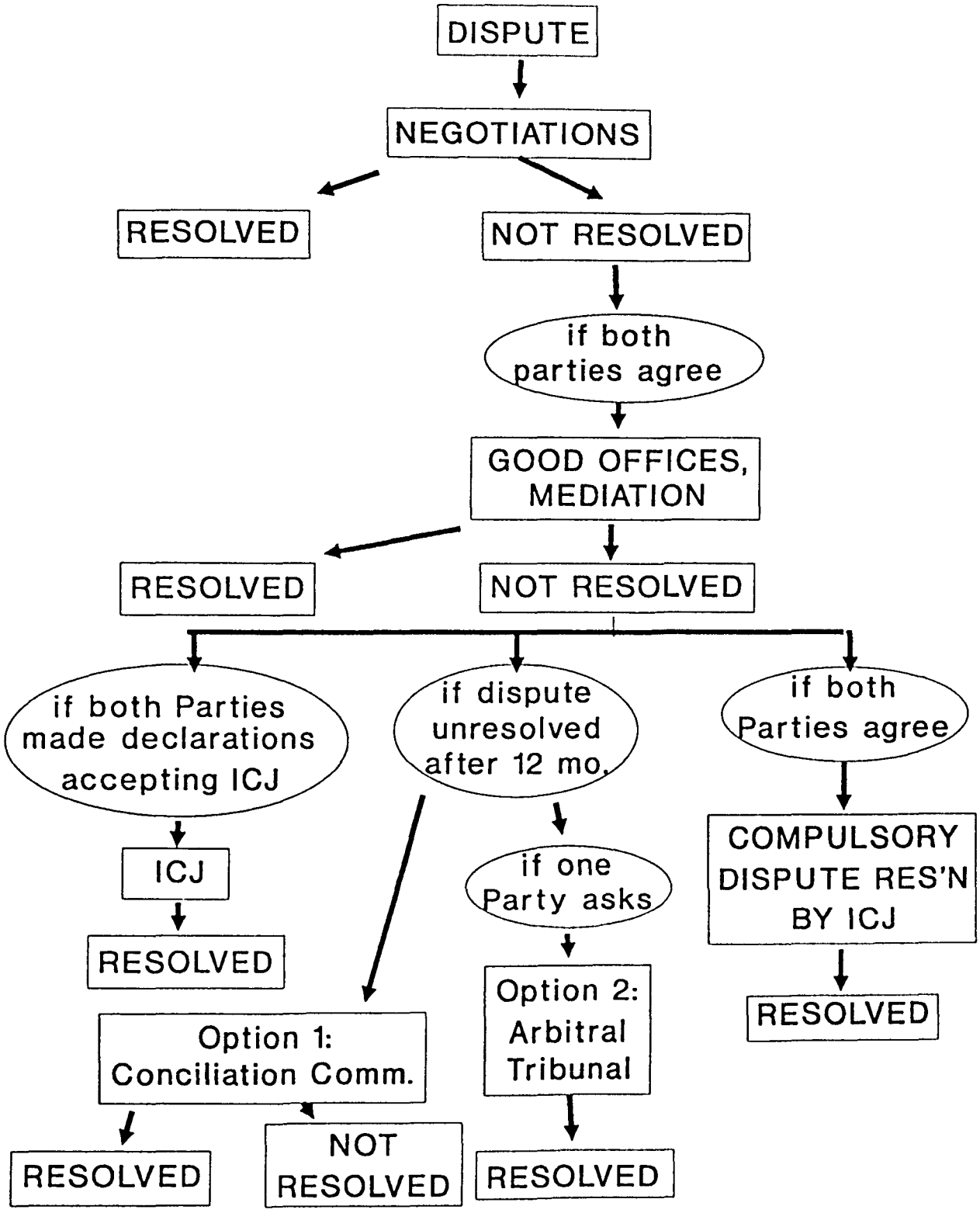
4. The Parties shall make every effort to take action under this Article by consensus. If all efforts at consensus have been exhausted, action shall, as a last resort, be taken by a two thirds majority vote of the Parties present and voting.

SETTLEMENT OF DISPUTES

Model 1



Model 2


DISPUTE
NEGOTIATIONS
RESOLVED
NOT RESOLVED
if both parties agree
GOOD OFFICES, MEDIATION
RESOLVED
NOT RESOLVED
if both Parties made declarations accepting ICJ
ICJ
RESOLVED
if dispute unresolved after 12 mo.
if one Party asks
Option 2: Arbitral Tribunal
RESOLVED
if both Parties agree
COMPULSORY DISPUTE RES'N BY ICJ
RESOLVED
Option 1: Conciliation Comm.
RESOLVED
NOT RESOLVED

Article 10 (Alternative B)
SETTLEMENT OF DISPUTES

MODEL 1

Negotiation and other peaceful means:

1. In the event of a dispute between Parties concerning the interpretation or application of this Convention or any Protocol thereto, the Parties concerned shall seek solution by negotiation.

2. If the Parties concerned cannot reach agreement by negotiation, they may jointly seek the good offices of, or request mediation by, a third party.

MODEL 2

Negotiation and other peaceful means:

1. In the event of a dispute between Parties concerning the interpretation or application of this Convention or any Protocol thereto, the Parties concerned shall seek solution by negotiation.

2. If the Parties concerned cannot reach agreement by negotiation, they may jointly seek the good offices of, or request mediation by, a third party.

Recourse to other third-party procedures

3. If the Parties concerned cannot settle their dispute in the manner set forth in paragraphs 1 and 2 of this Article, and if they so agree, the dispute shall be submitted to the International Court of Justice or to arbitration in accordance with Annex IV.

4. Failure to reach common agreement on submission of the dispute to the International Court of Justice or to arbitration does not absolve the Parties from the responsibility of pursuing the means of settlement pursuant to paragraphs 1 and 2 of this Article.

5. At the time of ratification, acceptance, approval, or accession to the Convention, or at any time thereafter, a Party or regional economic integration organization may declare in a written instrument submitted to the Depository that, for a dispute not resolved in accordance with paragraphs 1 and 2 above, it accepts in relation to any Party accepting the same obligation, one or both of the following means of dispute settlement:

(a) Arbitration in accordance with Annex IV.

(b) A proceeding before the International Court of Justice.

6. A declaration made under paragraph 5 above shall remain in force until it expires in accordance with its terms or until three months after written notice of its revocation has been deposited with the Depositary.

7. A declaration made under paragraph 5 above shall not affect the operation of paragraphs 1 and 2 of this article.

8. A new declaration, a notice of revocation or the expiry of a declaration shall not in any way affect proceedings pending before the International Court of Justice or the Arbitral Tribunal, unless the Parties to the dispute otherwise agree.

9. Declarations and notices referred to in this article shall be deposited with the Depositary who shall transmit copies thereof to the Secretariat and to all Parties.

10. If, after the expiry of twelve months from the date of a request made pursuant to paragraph 1 of this Article, the Parties concerned have not been able to settle their dispute or have not agreed on the competence of the International Court of Justice or the Arbitral Tribunal, the dispute:

OPTION 1: Conciliation Commission

shall be submitted to a Conciliation Commission. The Commission shall be composed of an equal number of members appointed by each Party concerned, and of a chairman chosen jointly by the members appointed by the Parties. The Commission shall render a final, non-binding decision, which the Parties shall consider in good faith.

OPTION 2: Judicial settlement

may be submitted, at the request of any one of the Parties, to the Arbitral Tribunal.

Article 11
AMENDMENTS TO THE CONVENTION

Proposals

1. Any Party may propose amendments to this Convention.

Adoption of amendments

2. Amendments to this Convention shall be adopted at a meeting of the Conference of the Parties. The text of any proposed amendment to this Convention shall be communicated to the Parties by the secretariat at least [three] [six] months before the meeting at which it is proposed for adoption. The secretariat shall also communicate proposed amendments to the Signatories to the Convention for information.

3. The Parties to the Convention shall make every effort to reach agreement on any proposed amendment to the Convention by consensus. If all efforts at consensus have been exhausted, and no agreement reached, the amendment shall be adopted by a [two-thirds] [three-fourths] [and whose net emissions of GHG's represent at least [xx%] [75%] of estimated global net emissions in the preceding year,] majority vote of such Parties present and voting at the meeting and shall be submitted by the Depositary to all such Parties for acceptance.

Voting

4. For the purposes of this article, "Parties present and voting" means Parties present and casting an affirmative or negative vote.

Entry into force of amendments

5. Instruments of acceptance of amendments shall be deposited with the Depositary. Amendments adopted in accordance with paragraph (3) above shall enter into force on the ninetieth day after the day of receipt by the Depositary of notification of their acceptance, by at least [two-thirds] [three-fourths] of the Parties to this Convention unless otherwise provided in the amending instrument itself.

6. The amendments shall enter into force for any other Party on the ninetieth day after that Party deposits its instrument of acceptance of amendments.

Article 12

PROTOCOLS

Adoption

1. This Convention and its protocols shall jointly constitute an international legal regime regarding climate change. The Conference of the Parties may at any meeting adopt protocols that are aimed at implementing the purposes and principles established in the Convention, specifying measures or obligations relating to certain aspects of climate change. The protocols shall be in conformity with the provisions of the Convention.

Notification of parties

2. The text of any proposed protocol shall be communicated to the Parties by the secretariat at least one hundred twenty days before such a meeting.

Entry into force

3. The requirements for the entry into force of any protocol will be established by that instrument and may include provisions regarding [accelerated] [differentiated] procedures] for entry into force.

Parties to a protocol

4. Only Parties to the Convention may be Parties to a protocol.

Only parties to protocol to take decisions relating to a protocol

5. Decisions concerning any protocol shall be taken only by the Parties to the protocol concerned.

Article 13

ADOPTION AND AMENDMENT OF ANNEXES TO THE CONVENTION

Annexes are integral to the Convention

1. The Annexes to this Convention shall form an integral part of this Convention, and, unless expressly provided otherwise, a reference to this Convention constitutes at the same time a reference to any annexes thereto.

Adoption of additional annexes to the Convention

2. Additional annexes to the Convention shall be proposed and adopted according to the procedure set forth in Article 11 (on Amendments to the Convention).

Procedure for entry into force of additional annexes to the Convention

3. Annexes which have been adopted in accordance with paragraph 2 above shall enter into force for all Parties to the Convention one hundred twenty days after the date on which the Depositary issued notices to such Parties of the adoption of the Annex, except for those Parties which have notified the Depositary, in writing, within that period of their non-acceptance of the Annex. The Annex shall enter into force for Parties which have withdrawn their notification of non-acceptance on the ninetieth day after the date of withdrawal of such notification has been received by the Depositary.

Procedure for amendments to annexes

4. The proposal, adoption and entry into force of amendments to Annexes to the Convention shall be subject to the same procedure as that for the proposal, adoption and entry into force of Annexes to the Convention.

5. If an additional annex or an amendment to an annex involves an amendment to the Convention, the additional annex or amended annex shall not enter into force until such time as the amendment to this Convention enters into force.

Article 14

RIGHT TO VOTE

1. Each Party to the Convention shall have one vote, except as provided for in paragraph 2 below.

2. Regional economic integration organizations, in matters within their competence, shall exercise their right to vote with the number of votes equal to the number of their member States that are Parties to the Convention and which are present at the time the vote is taken. Such an organization shall not exercise its right to vote if any of its member States exercises their right, and vice versa.

Article 15

DEPOSITARY

The Secretary-General of the United Nations shall be the Depositary of this Convention.

Article 16

SIGNATURE

This Convention shall be open for signature by States and by regional economic integration organizations at [ ] from [ ] to [ ], and at the United Nations Headquarters in New York from [ ] to [ ].

Article 17

RATIFICATION, ACCEPTANCE, APPROVAL AND ACCESSION

1. The Convention shall be subject to ratification, acceptance, approval and accession by States and by regional economic integration organizations. It shall be open for accession from the day after the date on which the Convention is closed for signature. Instruments of ratification, acceptance, approval and accession shall be deposited with the Depositary.

Regional economic integration organizations

2. Any regional economic integration organization which becomes a Party to this Convention without any of its member States being a Party shall be bound by all the obligations under the Convention. In the case of such organizations, one or more of whose member States is a Party to the Convention, the organization and its member States shall decide on their respective responsibilities for the performance of their obligations under the Convention. In such cases, the organization and the member States shall not be entitled to exercise rights under the Convention concurrently.

Declarations of competence

3. In their instruments of ratification, acceptance, approval or accession, the regional economic integration organizations shall declare the extent of their competence with respect to the matters governed by the Convention. These organizations shall also inform the Depositary, who will in turn inform the Parties, of any substantial modification in the extent of their competence.

Article 18

ENTRY INTO FORCE

Entry into force of the Convention:

1. This Convention shall enter into force on:

(Four options)

- **Option 1:**
  the ninetieth day after the date of deposit of the [twentieth] [twenty-fifth] [fortieth] [fiftieth] [sixtieth] instrument of ratification, acceptance, approval or accession.

- **Option 2:**
  the ninetieth day after the date of deposit of the instrument of ratification, acceptance, approval or accession from States or regional economic integration organizations whose [net] emissions of greenhouse gases [CO_2] represent [two-thirds] [three-fourths]] of estimated total global net emissions in [year].

- **Option 3:**
  the ninetieth day after the date of deposit of the [twentieth] [twenty-fifth] [fortieth] [fiftieth] [sixtieth] instrument of ratification, acceptance, approval or accession, and of ratification, acceptance, approval or accession from States or regional economic integration organizations whose [net] emissions of greenhouse gases [CO_2] represent [two-thirds] [three-fourths]] of estimated total global net emissions in [year].

- **Option 4:**

  the ninetieth day after the date of deposit of the [twentieth] [twenty-fifth] [fortieth] [fiftieth] [sixtieth] instrument of ratification, acceptance, approval or accession, or the ninetieth day after the date of deposit of the instrument of ratification, acceptance, approval or accession from States or regional economic integration organizations whose [net] emissions of greenhouse gases [CO_2] represent [two-thirds] [three-fourths] of estimated total global net emissions in [year], whichever is the earlier.

Entry into force for parties once convention already in force

2. For each State or regional economic integration organization which ratifies, accepts or approves this Convention or accedes thereto after the deposit of the [twentieth] [twenty-fifth] [fortieth] [fiftieth] [sixtieth] instrument of ratification, acceptance, approval or accession, it shall enter into force on the ninetieth day after the date of deposit by such State or regional economic integration organization of its instrument of ratification, acceptance, approval or accession.

Regional economic integration organizations

3. For the purposes of paragraphs 1 and 2 above, any instrument deposited by a regional economic integration organization shall not be counted as additional to those deposited by member States of such organization.

Article 19

RESERVATIONS AND DECLARATIONS

1. [No] reservations may be made to this Convention.

Parties not Precluded from Making Declarations

2. Paragraph 1 above shall not, however, preclude a State or regional economic integration organization when signing, ratifying, accepting, approving or acceding to this Convention from making declarations or statements, provided that such declarations or statements do not purport to exclude or to modify the effects of the provisions of the Convention in their application to that State or regional economic integration organization.

Article 20

WITHDRAWAL

Written notification of withdrawal from Convention

1. At any time after [three] [four] [five] years from the date on which this Convention has entered into force for a Party, that Party may withdraw from the Convention by giving written notification to the Depositary.

Effective date of withdrawal

2. Any such withdrawal shall take effect upon expiry of one year from the date of its receipt by the Depositary, or on such later date as may be specified in the notification of the withdrawal.

Withdrawal from Convention considered as withdrawal from Protocol

3. Any Party that withdraws from this Convention sha
ll be considered as also having withdrawn from any protocol to which it is a Party.

Article 21

AUTHENTIC TEXTS

The original of this Convention, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

In witness whereof the undersigned, being duly authorized to that effect, have signed this Convention.

Done at .....this day of .....19.....

C. Texts related to "Legal and institutional mechanisms related to adequate and additional financial resources and technological needs and cooperation, and technology transfer to developing countries corresponding to the commitments agreed to in Working Group I" (Decision 1/1, paragraph 7 (c)

Note by the Co-Chairs of Working Group II

During the third session of the Committee, Working Group II engaged in an extensive discussion of the legal and institutional mechanisms related to financial resources and transfer of technology. Many delegations responded directly to the questions your Co-Chairs had posed on pages 59 and 60 of document A/AC.237/Misc.8. On the basis of this discussion, we believe that many of the major issues relating to mechanism(s) on financial resources and technology transfer were clarified and we have prepared this Note accordingly.

Policy Direction

The Co-chairs believe that in Nairobi there was a consensus that the responsibility for policy direction and the authority to establish the operational criteria for the management of the financial resources and transfer of technology mechanism must rest with the Conference of the Parties. We have therefore factored this approach into the functions for the Conference of the Parties which have been set out separately in this document.

Administration

In addition, it is our belief that in Nairobi there was broad agreement that any financial mechanism established under the Conference of the Parties should maintain a unique identity i.e. regardless of whether the financial mechanism is an independent body or associated with an existing institution, the funds allocated for meeting the provisions of the Convention would be discrete and separate.

Contrary to the discussion on responsibility for policy-making and the separate nature of the financial resources and technology transfer mechanism, there was no consensus in Nairobi on how, or which body should administer the above mechanism. Nonetheless, the Nairobi discussion was useful in clarifying which options might be considered. In broad terms, most of the proposals relating to the administration of a financial resources and technology transfer mechanism can be divided into two categories - those that felt the administration should be done through the modified Global Environmental Facility (GEF) of the World Bank/UNEP/UNDP, and those that felt the administration should be clearly separated from the GEF.

Rather than debate at this point which institution is best placed to administer the financial resources/technology transfer mechanism, we believe it would be more beneficial to set out our thoughts on the operational criteria for this body and the functions that it should perform. This we have done in the attached text. Once we have general agreement on the functions the Working Group wishes this body to perform, the capability of various institutional options to execute these functions can be examined. It will then be possible to judge which body is most appropriate to perform these functions, to elaborate further the details of how the administrative mechanism might function and, finally, to decide on any changes that might be required to meet the specific requirements of the Parties to this Convention.

Your Co-Chairs have also examined the question of whether separate administrative bodies are needed to deal with financial resources and transfer of technology. Given that the policy decisions for both bodies will be taken by the Conference of the Parties, after considering the necessary close linkages between the provision of financial resources and transfer of technology to meet the provisions of this Convention, we therefore consider that a single body would be more appropriate and have drafted the text accordingly.

Article 22

ADMINISTRATIVE MECHANISM FOR FINANCIAL RESOURCES AND TECHNOLOGY TRANSFER

Establishment

1. An administrative mechanism for the administration of the financial resources and the transfer of technology, with a democratic and transparent system of governance, is hereby [established] [designated under the auspices of .....].

Functions

2. The administrative mechanism for financial resources and technology transfer shall:

(a) pursuant to the operational guidelines and policy direction of the Conference of the Parties, be responsible for the administration of funds, including those funds related to the promotion of transfer of technology, provided by the Parties for the fulfilment of the obligations of the Convention;

(b) be accountable to the Conference of the Parties for its allocation of the funds and for ensuring that the funding priorities and criteria established by the Conference of the Parties are adhered to in its financial activities;

(c) receive and collect assessed funds from the Parties to the Convention;

(d) be responsible for receiving voluntary contributions, either financial or in kind (technology) provided by Parties, in accordance with criteria set out by the Conference of the Parties;

(e) establish appropriate accounting procedures to ensure that all assessments and contributions made to fulfil the obligations of the Convention are properly recorded and credited;

(f) be responsible for facilitating the identification and selection of projects for assisting Parties to meet their obligations under this Convention, based on criteria and priorities established by the Conference of the Parties;

(g) coordinate funding for such projects, including proposals involving transfer of technology and endogenous capacity building, and, where possible, seek to match projects with available funds and technology to ensure maximum efficiency and cost effectiveness;

(h) finance its operations from a fund, separate from its programme resources, established specifically to cover its administrative expenses;

(i) establish internal procedures to evaluate and assess the effectiveness of its programmes drawing on outside expertise as required and reporting on such evaluations and assessments in a timely fashion to the Conference of the Parties;

(j) provide annual reports to the Conference of the Parties on its operations and, as required, information to the subsidiary bodies of the Convention of the Parties, in order that they can fulfil their mandates; and

[(k) administer the cooperative system of exchange of emissions commitments according to the terms of the Conventions;]

INSURANCE

Note by the Co-Chairs of Working Group II

The establishment of an innovative insurance mechanism to address in particular the problems associated with sea-level rise resulting from climate change was raised in Geneva and discussed further in Nairobi. Delegations expressed interest in the concept although many questions remain. A brief and general article on insurance has been submitted and follows this note. It would be elaborated on in an annex which has yet to be drafted.

We would pose two questions that you may wish to consider:

- ***what has been proposed is an international insurance pool that would be separate from an administrative mechanism for financial resources and technology transfer. What would be the relationship between such an insurance fund and the administrative mechanism for financial resources and technology transfer?***

- ***do you believe that the proposed insurance fund is appropriate for the Convention at this time, or should it be developed by the Conference of the Parties?***

ARTICLE 23

INSURANCE

[l. the Parties shall establish separate supplementary financial mechanisms to assist developing countries, particularly least developed countries, and vulnerable small island and low lying coastal developing countries, to prevent or mitigate the consequences of sea-level rise resulting from climate change, as specified in the Annex on Insurance Mechanism (to be developed).]

ANNEX I

RESEARCH AND DEVELOPMENT AND SYSTEMATIC OBSERVATION

1. The Parties recognize that the major scientific issues related to climate change are:

   (a) understanding the interactions between changes in the climate system and the physical, chemical, biological, hydrological and geological processes and solar cycles in the atmosphere, oceans and land;

   (b) understanding the impacts of climate change on ecosystems and social and economic systems; and

   (c) evaluating the methodologies for assessing options for mitigating and adapting to climate change, including consideration of costs and benefits of such options.

2. The Parties recognize the need to cooperate in conducting research and development and systematic observation, in accordance with Article 2, in such areas as:

   (a) Systematic Observations. Long term systematic observations of the Earth's atmosphere, oceans, seas, terrestrial and socio-economic systems on global and regional scales, including documenting the contemporary and historical changes in the Earth's environment using an integrated space, land and ocean based observing system and relevant paleoenvironmental data. Specifically there is a need for systematic observations to measure and/or estimate:

      (i) atmospheric parameters, including,

         - greenhouse gases, aerosols and their possible precursors;
         - clouds, by type, amount, height, composition and optical properties;
         - precipitation, evaporation and water vapour, temperature, wind and radiative fields.

(ii) oceanic parameters, including,

- ocean fluxes, particularly of heat and of greenhouse gases, aerosols, and their possible precursors between the ocean surface and atmosphere;

- sea level, temperature, roughness, circulation, ice cover, chemical composition, biological activity and colour.

(iii) terrestrial parameters, including,

- fluxes of heat and of greenhouse gases, aerosols, and their possible precursors between ecosystems and the atmosphere;
- extent, state and productivity of managed and unmanaged ecosystems;
- physical surface characteristics, such as temperature, albedo, roughness, soil parameters, snow, ice, permafrost, glaciers, lake levels, and river discharge; and
- geodynamic, seismic and volcanic processes and their consequences.

(iv) socio-economic parameters, including,

- population dynamics;
- urban development;
- rural population;
- type, extent and variability of land use practices;
- economic variables including reserves of natural resources, incremental costs, debt problems, and terms of trade;
- geographic characteristics of countries;
- technology and practices in energy, forestry, agriculture, transport, hydrology, and industry;
- human health.

(b) Process research. Research of the coupled physical, chemical, biological, hydrological, geological, economic and social processes that affect the Earth's climate system. There is a need for an improved understanding of the processes and development of methodologies governing:

(i) the sources and sinks of greenhouse gases, aerosols, and their possible precursors, which affect future atmospheric concentrations and the Earth's radiative balance, and how these may be influenced by climate change. Specifically:

- identification, quantification and development of an understanding of the processes that control oceanic, terrestrial, and atmospheric sources, sinks and reservoirs of anthropogenic and natural origin;
- quantitative estimation of radiative properties and lifetimes;
- improved indices that reflect the radiative forcing of greenhouse gases, taking into account historical emissions;
- development and improvement of methodologies for national inventories of sources, sinks and reservoirs.

(ii) atmospheric cycling of radiation, heat and water, with emphasis on cloud formation, dissipation and radiative properties, which influence the response of the atmosphere to greenhouse forcing. Specifically, research on:

- the atmospheric distribution of water vapour, precipitation, and clouds;
- evaluating the radiative properties of clouds;
- evaluating the temporal variability of solar radiative input and atmospheric transmission;
- the evaluation and mapping of surface albedo.

(iii) oceans, which influence the patterns and rate of climate change. Specifically, studies to establish the mechanisms governing:

- ocean dynamics;
- the transport of heat and chemicals;
- exchanges of energy and chemicals with the atmosphere;
- interactions between the ocean and land;
- the role of biological processes in the cycling of carbon and sulfur and their response to anthropogenic activities;
- sea level changes.

(iv) the role of terrestrial systems in hydrological and ecological processes, which affect regional climate change and water availability. Specifically, studies of the role of terrestrial geophysical and biological, hydrological processes in the cycling of energy, water and nutrients on land and exchange with the atmosphere, the sea level rise and rivers of fresh water and their response to environmental changes.

(v) the cryosphere, particularly in polar regions, which affects global sea level changes and regional climate change. Specifically, studies of:

- the mass balance of polar ice sheets and glaciers and their response to climate change;
- the role of sea ice in the atmosphere-ocean exchange of energy;
- the processes controlling snow accumulation, redistribution, and seasonal melting;
- the dynamics of permafrost systems.

(vi) The biosphere and the oceans,including those of the Antarctica and the Arctic regions, as reservoirs or sinks, as well as ways and means of preserving and enhancing sinks and reservoirs and creating new ones.

(vii) economic and social processes, which contribute and react to climate change. Specifically, studies of how the climate system is influenced by:

- economic growth, policies and practices;
- technology and practices in a wide range of sectors including energy, agriculture, forestry, transportation and industry; and
- social systems, policies and practices.

(c) Modelling and prediction. Prediction of the magnitude and rate of future climate change, including an identification and assessment of uncertainties, through the development and validation of integrated climate system models with enhanced regional and national resolution, social and economic models, and the links and feedbacks between climate change and social and economic processes. At a global, regional and national scale, there is a need for:

(i) improved representation within models of processes affecting climate;

(ii) evaluation of the predictability of climate;

(iii) comparison of model output with current observation, past records and transient climate parameters; and

(iv) development of fully coupled climate models, which integrate the effects of changing atmospheric radiative properties with changes in physical, chemical, biological, hydrological, geological processes in solar cycles and between the atmosphere, oceans and land, linked to social and economic models.

(v) simulation of climate change based on different emission scenarios.

(d) Impact research. Research to develop methodologies for evaluating the local and regional and national impacts of climate change, and identifying the environmental, economic and social consequences. There is a need for an improved understanding of the impact of climate change on:

(i) natural terrestrial, aquatic and coastal ecosystems and resources. As a function of rate and magnitude of climate change, determining the sensitivity of:

- ecosystems (e.g., productivity, extent) to changes in temperature, hydrological system (e.g., ground-water, precipitation, soil moisture), atmospheric composition, and sea level;
- changes in stability and composition in ecosystems; and
- The biological diversity of marine life in the oceans including shifts in marine organisms.

(ii) agriculture, forestry and fisheries. Conducting regional studies of the impacts of climate change on:

- potential productivity of crops;
- the vulnerability of major crops and their varieties;
- the abundance and distribution of fisheries;
- socio-economics of changed transport, storage processing and marketing conditions.

(iii) water resources. Examining, on a regional basis, effects of changes in the hydrological cycle on:

- provision of drinking, irrigation and industrial water supplies;
- impact on agriculture and inland navigation;
- combined effects of climate change and land use changes on water resources;
- drought and desertification.

(iv) coastal environment

- evaluating sea level and temperatures, and their subsequent regional impacts on geological and ecological processes, including coral and planktonic populations;
- the viability and quality of human settlements; and
- frequency and magnitude of marine disasters such as severe storms and storm surges and their impact on coastal structures.

(v) Social systems and economics. Investigating the effects of changes in climate, weather, sea level and temperature on:

- disease vectors, viability of pathogens, nutrition and other factors relevant to human health;
- the viability and quality of land use, human settlements, the built environment and all other aspects contributing to the quality of life;
- the economic, social and cultural consequences for societies, especially for vulnerable small island countries.

(e) Research to develop response measures, including development of technology for the mitigation of, and adaptation to, climate change, including for:

(i) examining options for reducing sources and/or increasing sinks of greenhouse gases and their potential precursors

- from energy, industrial, commercial, domestic and transport sources through studies of:
  - . technology options for low emission, high efficiency and alternative technologies, including biotechnology, biomass, wind and solar energy, and technologies for greenhouse gas fixation; and
  - . applicability, cost and social factors affecting use of conventional and newly developed technology options;
- from forestry and agriculture through studies of:
  - . methods for reducing emissions and/or increasing sinks;
  - . applicability, cost and social factors affecting use of lower emission or enhanced sink practices;
- from oceans through studies of methods, costs and consequences of increasing oceanic uptake;
- by utilizing economic and other policy instruments; and
- through education and public information techniques.

(ii) Examining options for adapting to a changing climate of:

- natural terrestrial, aquatic and coastal ecosystems and resources;
- agriculture, forestry and fisheries;
- water resources;
- coastal environment; and
- social systems and economics.

(iii) Assessing the costs, benefits, and environmental and social consequences of mitigation and adaptation responses, including:

- as a function of the timing and magnitude of climate change;
- the direct and indirect links between responses and economic activity, including eradication of poverty and trade; and
- the distributional and other social implications of responses within and between countries and regions; and
- countries which are not in a position to use substitues for fossilfuels or do not possess the flexibility to switch to non-fossil fuels.

(iv) Environmentally safe and sound technologies, practices and measures.

ANNEX II

EXCHANGE OF INFORMATION

The Parties to the Convention shall exchange information in accordance with Article 3 on Exchange of Information. Such information shall include the following:

1. **Scientific Information**

This includes information on:

(a) planned and ongoing research programmes and activities, both governmental and private;

(b) relevant scientific results published in peer-reviewed literature on the understanding of the physics and chemistry of the Earth's atmosphere, the climate system, the oceans and the biosphere and of their susceptibility to change;

(c) relevant unpublished data and results;

(d) the assessment of research results and recommendations for future research;

(e) measures for strengthening and assisting in building national capacity of developing countries;

(f) net emission inventories including, ambient concentrations, emission and removal rates, as well as net emissions, of greenhouse gases and the techniques for systematic observation of these variables; and

(g) methodologies for the development of net emission inventories.

2. **Technological, Technical and Socio-economic Information**

This includes information on:

(a) the availability, feasibility and costs of alternative technologies, and agricultural and forestry practices to reduce emissions and increase sequestration of greenhouse gases, as well as related planned and ongoing research, including appropriate information on relevant safe technologies and related equipment and their manuals and guides;

(b) the limitations involved in using such alternative technologies and agricultural and forestry practices;

(c) national strategies and programmes to mitigate and adapt to climate change, including actions taken, relevant socio-economic information and available assessments of effectiveness; and

(d) relevant business and commercial activities.

3. **Legal Information**

This includes information on:

(a) national laws, administrative measures and legal research relevant to the objectives of the Convention;

(b) international agreements, including bilateral agreements, relevant to the objectives of the Convention; and

(c) methods and terms of licensing and availability of patents relevant to alternative technologies and agricultural and forestry practices.

ANNEX III

REPORTING

1. Reports submitted pursuant to Article 9 (on Reporting) shall contain the following information:

(a) national strategies to mitigate and adapt to climate change;

(b) measures taken in fulfilment of the obligations under the Convention, with particular attention to energy efficiency and conservation, new energy sources, protection and enhancement of sinks, coastal zone management, transportation and industrial processes;

(c) relevant national laws, policies and administrative measures, including the use of economic instruments;

(d) contributions to the financial and technology transfer mechanism;

(e) national inventories of net emissions of greenhouse gases prepared in accordance with internationally accepted methodologies;

(f) expected changes and trends in net emissions of greenhouse gases (with particular reference to the achievement of any target established in the Convention);

(g) relevant national research and development and systematic observation programs and participation in international programs;

(h) national programs and international cooperation with regard to education, training and public awareness;

(i) efforts to implement obligations jointly with another Party or Parties; and

(j) such other actions relevant to the achievement of the objective of the Convention.

Timing

2. Unless otherwise decided by the Conference of the Parties, reports to update the information contained in the first report shall be submitted within two years of the date of submission of the first report and biennially thereafter. Due account shall be taken of the differentiated obligations of Parties.

Confidential Information

3. A Party may designate the following types of information contained in its report as confidential:

(a) information that is directly related to the national defence of that Party;

(b) information that is of a proprietary commercial nature;

(c) information the release of which would result directly in significant economic or commercial dislocation for that Party; or

(d) such other information as agreed upon by the Party and the Advisory Committee on Implementation.

ANNEX IV

ARBITRATION

Article 1

Unless the Parties to a dispute otherwise agree, the arbitration referred to in Article 10 (Alternative B on Settlement of Disputes) of the Convention shall be conducted in accordance with the procedure set out in articles 2 to 17 below.

Article 2

The claimant party shall notify the secretariat of the reference of a dispute to arbitration pursuant to Article 10 (Alternative B) on the International Implementation Committee of the Convention. The notification shall state the subject matter of the arbitration and include, in particular, the articles of the Convention or the protocol, the interpretation or application of which is at issue. The secretariat shall forward the information thus received to all Parties to the Convention or to the protocol concerned.

Article 3

1. In disputes between two parties, the Arbitral Tribunal shall consist of three members. Each of the parties to the dispute shall appoint an arbitrator within two months of the notification referred to in article 2 of this Annex and the two arbitrators so appointed shall designate by common agreement the third arbitrator who shall be the chair of the tribunal. The latter shall not be a national of one of the parties to the dispute, nor have his or her usual place of residence in the territory of one of these parties, nor be employed by any of them, nor have dealt with the case in any other capacity.

2. In disputes between more than two parties, parties in the same interest shall appoint one member of the Tribunal jointly by agreement.

3. Any vacancy shall be filled in the manner prescribed for the initial appointment.

Article 4

1. If the chair of the arbitral tribunal has not been designated within two months of the appointment of the second arbitrator, the Secretary General of the United Nations shall, at the request of either party, designate the chair within a further two months' period.

2. If one of the parties to the dispute does not appoint an arbitrator within two months of receipt of the notification referred to in article 2 of this Annex the other party may inform the Secretary-General of the United Nations, who shall designate the other arbitrator within a further two months' period.

Article 5

The Arbitral Tribunal shall render its decision in accordance with international law, as well as the provisions of this Convention and any protocols concerned.

Article 6

Unless the parties to the dispute otherwise agree, the Arbitral tribunal shall determine its own procedure, assuring that each Party has a full opportunity to be heard and to present its case.

Article 7

The parties to the dispute shall facilitate the work of the Arbitral Tribunal and, in particular, using all means at their disposal, shall:

a) provide it with all relevant documents, facilities and information; and
b) enable it when necessary to call witnesses or experts and receive their evidence.

Article 8

The parties and the arbitrators are under an obligation to protect the confidentiality of any information they receive in confidence during the proceedings of the Arbitral Tribunal.

Article 9

Unless the Arbitral Tribunal determines otherwise because of the particular circumstances of the case, the costs of the Tribunal shall be borne by the parties to the dispute in equal shares. The Tribunal shall keep a record of all the costs, and shall furnish a final statement thereof to the parties.

Article 10

Any Party to the Convention or, as the case may be, to a protocol thereto, that has an interest of a legal nature in the subject matter of the dispute that may be affected by the decision in the case, may intervene in the proceedings with the consent of the Tribunal.

Article 11

The Tribunal may hear and determine counterclaims arising directly out of the subject matter of the dispute.

Article 12

Decisions both on procedure and substance of the Arbitral Tribunal shall be taken by a majority vote of its members.

Article 13

If one of the parties to the dispute does not appear before the Arbitral Tribunal or fails to defend its case, the other party may request the Tribunal to continue the proceedings and to render its final decision. Absence of a party or failure of a party to defend its case shall not constitute a bar to the proceedings. Before rendering its final decision, the Arbitral Tribunal must satisfy itself that the claim is well founded in fact and law.

Article 14

The Tribunal shall render its final decision within five months of the date on which it is fully constituted unless it finds it necessary to extend the time limit for a period which shall not exceed a further five months.

Article 15

The final decision of the Arbitral Tribunal shall be confined to the subject matter of the dispute and shall state the reasons on which it is based. It shall contain the names of the members who have participated and the date of the final decision. Any members of the Tribunal may attach a separate or dissenting opinion to the final decision.

Article 16

The final decision shall be binding on the parties to the dispute and without appeal unless the parties to the dispute have agreed in advance to an appellate procedure. It shall be complied with by the parties to the dispute.

Article 17

Any controversy that may arise between the parties to the dispute as regards the interpretation or manner of implementation of the final decision may be submitted by either party for decision to the Arbitral Tribunal which rendered it.

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INTERGOVERNMENTAL NEGOTIATING COMMITTEE FOR
A FRAMEWORK CONVENTION ON CLIMATE CHANGE
Fourth session
Geneva, 9-20 December 1991

REPORT OF THE INTERGOVERNMENTAL NEGOTIATING COMMITTEE FOR A FRAMEWORK CONVENTION ON CLIMATE CHANGE ON THE WORK OF ITS FOURTH SESSION, HELD AT GENEVA FROM 9 TO 20 DECEMBER 1991

CONTENTS

		Paragraphs	Page
I.	INTRODUCTION	1	1
II.	ORGANIZATIONAL MATTERS	2 - 14	1
	A. Opening of the session	2	1
	B. Attendance	3 - 8	2
	C. Adoption of the agenda	9	4
	D. Documentation	10	4
	E. Organization of work	11	4
	F. Future work	12 - 14	4
	G. Provisional agenda for the fifth session	15	5

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CONTENTS (continued)

		Paragraphs	Page
III.	PREPARATION OF A FRAMEWORK CONVENTION ON CLIMATE CHANGE	16 - 66	5
	A. Report on Working Group I: Commitments	16 - 27	5
	B. Report on Working Group II: Mechanisms	28 - 42	7
	C. Consideration, integration and completion by the plenary of the draft texts submitted by the Working Groups	43 - 66	9
IV.	REVIEW OF EXTRABUDGETARY FUNDS	67 - 73	12
	A. Special voluntary fund to support the participation of developing countries	68 - 70	12
	B. Trust fund for the negotiating process	71	13
V.	ADOPTION OF THE REPORT	74 - 76	13
VI.	CLOSURE OF THE SESSION	77	14

Annexes

I.	List of documents before the Committee at its fourth session	15
II.	Consolidated working document	18

C. Consideration, integration and completion by the plenary of the draft texts submitted by the Working Groups

43. At its second plenary meeting, on 16 December, the Committee heard procedural progress reports from the Co-Chairmen of Working Groups I and II.

44. The plenary had before it an informal note prepared by the secretariat on the preparation of an integrated working document (A/AC.237/Misc.15), which included a possible provisional structure of the framework convention in the form of a list of headings derived from documents A/AC.237/Misc.12 and 13. The Executive Secretary indicated that the content and order of the list would be modified as a result of further work by the two Working Groups. There was broad agreement among delegations that the informal note was useful as an indicative device for guiding the Committee's work toward an integrated working document. There was an exchange of views regarding further consolidation of headings so as to arrive at a document having a balanced structure.

45. Document A/AC.237/Misc.14/Rev.1 on definitions was also before the plenary. At the suggestion of the Chairman it was agreed that the two Working Groups should propose which terms needed definition in the framework convention. The Committee could then decide how best to proceed further.

46. The meeting concluded with an exchange among a number of delegations on the scope of the framework convention. Statements were made by representatives of 19 States, including statements on behalf of the African countries, the European Economic Community and its member States, and States members of the Group of 77.

47. At its 3rd plenary meeting, on 19 December, the respective Co-Chairmen of Working Groups I and II presented oral reports to the Committee on the work accomplished during the present session and thanked delegations and the secretariat for the support they had received. Both sets of Co-Chairs gave their own impressions of convergences and di ergences in views expressed on the matters under consideration. The main points of these impressions are summarized below.

1. Oral reports on Working Group I

48. At the beginning of its deliberations, the Working Group decided to use the text submitted by the Bureau and contained in document A/AC.237/Misc.12 as a basis for its work. A first reading was given to the various chapters i.e. the preamble, principles, objective, general commitments, specific commitments and paragraph 6(c) of decision 1/1 relating to countries in special situations.

49. The Working Group made definite progress towards the elaboration of an agreed text of the preamble in the second reading. Progress was made in the streamlining of phrasing, agreement on the substance of paragraphs, and rationalization of the texts to avoid duplication with other sections of the Convention. Square brackets and difficulties still remained in some paragraphs.

50. In the case of the principles and objective of the Convention, an informal informal meeting of the Working Group, convened on Saturday 14 December under the chairmanship of the Vice-Chairman, undertook a second reading of the draft and produced a streamlined text. There was general agreement on the concept of sustainable development, the need for an integration of environmental protection and economic development, the need to protect the climate for present and future generations of mankind and the discharge of obligations on the basis of a common but differentiated responsibility, the precautionary principle and the specific needs of developing

countries. Some countries continued to express doubts about the need to incorporate principles into the text of the Convention. They reserved their position until the achievement of agreement on commitments, from which clear principles might emerge. Others continued to attach importance to the principles, saying that they were very important in guiding negotiations on commitments.

51. The text of the objective of the Convention had been shortened, but a few brackets remained and it was hoped that those would be cleared at the next session.

52. The discussion on commitments led to a greater level of agreement on matters relating to inventories, adaptation, research and information, as well as education and public awareness. Proposals on the publication and/or updating of programmes and strategies, as well as policies on emissions, and sinks and reservoirs, were subject to intense debate. At its next session, the Committee would have to examine further the question of the inclusion of annexes to incorporate the more detailed aspects of the commitments.

53. Some delegations called attention to the need to provide for differentiation in the implementation of commitments. It should be noted that the section originally entitled "Common Commitments" went through two rounds of discussion, whilst the section on specific commitments on sources and sinks, financial resources and transfer of technology went through only one. This might explain why that section of the consolidated text contained fewer brackets and alternatives. Nevertheless, divergence of views existed in particular as far as quantitative targets for stabilization and reduction of emissions were concerned. Other areas of disagreement included the choice of gases to be controlled, the nature of the measures to be undertaken, the criteria to be used for the control of emissions and whether the implementation of the commitments would be individual or collective.

54. The debate on financial resources and transfer of technology failed to narrow down the major differences existing among the various delegations on the creation of an international climate fund and its governance and on the criteria to be applied for technology transfer or cooperation.

55. In addition, the section on special situations did not solve the question of the categorization of countries with regard to their special situations, needs and circumstances. In this case too, lack of time prevented the Working Group from giving a second reading to the revised text.

56. The Working Group decided nevertheless that even in cases where only one reading was possible, the revised texts should be forwarded to plenary, as they were, with the hope that there would be enough time to have the documents translated into all languages so that delegates could take copies home to their capitals and confer with their governments.

57. One positive outcome of the session was that delegations were keener to meet in informal groups to sort out their differences and come up with compromise texts. This led to a number of joint proposals being submitted on principles and on commitments.

58. The texts as they now stood were the product of a detailed fine scrutiny of the most fundamental questions which still required a process of intense negotiation. They provided a firm basis for future work, but contained a significant number of aspects which called for greater study before agreement could be reached. Fundamental questions such as structure of and compliance with commitments, differentiation of their application and the close relationship between commitments and economic and social development, as well as the relationship among commitments which until the present time had appeared in various sections, had to be resolved. Various delegations reiterated the need for an integration of the sections. Of no less importance was the close coordination of the commitments addressed by Working Group I and the mechanisms which were being dealt with by Working Group II.

2. Oral reports on Working Group II

59. The Co-Chairs of Working Group II expressed the belief that despite the number of brackets in the document, credible progress had been made, but that each step forward exposed with ever greater clarity just how far there was still to go.

60. The entire Revised Single Text on Elements Relating to Mechanisms (A/AC.237/Misc.13) received a complete reading; delegations had had the opportunity both to consider the proposals of the Co-Chairs and to provide wording of their own where their vision of the requirements of the Convention differed from those proposals. Working Group II had produced a highly bracketed but fully representative text covering all Articles and Annexes under the Working Group's mandate. That accomplishment was an important and necessary step towards a unified negotiating text.

61. In the process of developing that text, delegations had engaged in a reasoned exchange of national views and, through those deliberations, refined those areas where fundamental differences remained and which would consequently require additional preparations for substantive negotiations. On certain issues, the text clearly established alternatives that delegations would have to consider. Those options included core issues such as whether subsidiary bodies, other than a secretariat, should be established in the Convention or left to the Conference of the Parties, whether the financial mechanism should be a newly-established and independent body or associated with an existing institution, and whether an Executive Committee was required. The establishment of clear alternatives in the text should help delegations develop their negotiating positions for the next session.

62. In addition, the Working Group had heard informal briefings on issues of particular relevance.

63. While the development of a bracketed text was an important step forward, the work that remained to be done should not be underestimated. Specifically:

(a) While the draft text contained the proposals of all delegations, it was not yet an authentic negotiating text. The document remained long and cumbersome and was not yet internally coherent or consistent. It would require considerable further refinement before it could be considered a true and realistic negotiating text;

(b) In several important areas, Working Group II had proceeded as far as it could without more definitive direction from Working Group I; the linkages between the progress achieved in both Working Groups would be increasingly critical;

(c) Two types of differences remained: those on wording and phraseology, and those where substantive and profound differences remained on fundamental issues related to mechanisms in the Convention. Delegations would have to engage in considerable preparatory work in capitals prior to the fifth session on elements in virtually every section of the Convention. In particular, important differences on the financial mechanism, the relationship of that mechanism to technology issues, the role of annexes, the settlement of questions related to implementation, and institutional structure needed to be addressed. That bridging process could only begin in earnest at the fifth session.

3. Conclusion

64. At its 3rd plenary meeting, on 19 December, a consolidated working document (A/AC.237/Misc.17 and Add.1-9), was submitted to the Committee. It had been prepared by the secretariat under the guidance of the Chairman of the Committee and the Co-Chairmen of the Working Groups, in the light of the Committee's earlier discussion. The document assembled texts that were indicative of the state of play in the two Working Groups, organized under a provisional list of headings. The Committee noted that the document was intended to facilitate further work on the framework convention but did not preclude the introduction of new elements. The Committee also noted that an edited version of the document would be published subsequently as an annex to the report of the Committee on the work of its fourth session (see Annex II below).

65. Statements evaluating the progress of work in the Committee, commenting on the texts in the consolidated working document and making proposals for future work on the convention were made by representatives of 15 States, including one on behalf of the African countries. A statement was made on behalf of a number of non-governmental organizations.

66. Upon the proposal of the Chairman, the Committee agreed that the consolidated working document should be carefully reviewed in order to draw attention to possible improvements in consistency and harmonization of language, to duplication which could be eliminated, and to other technical ways of enhancing its integration. It was understood that this review would not attempt to reformulate positions in the document. The Committee noted the intention of the Chairman, in consultation with the Bureau and the Officers of the Working Groups, to submit a report to its fifth session with recommendations on those matters. It further noted that the Chairman would request the Executive Secretary to undertake a technical review as a basis for his report and that the Executive Secretary would seek advice from other parts of the United Nations Secretariat, including the Office of Legal Affairs.

IV. REVIEW OF EXTRADBUDGETARY FUNDS

67. At the 2nd plenary meeting, on 16 December, the Executive Secretary introduced document A/AC.237/14, entitled "Review of extrabudgetary funds".

A. Special voluntary fund to support the participation of developing countries

68. The Executive Secretary thanked contributors who had responded to the appeal for additional funding made during the Nairobi session. He also thanked UNCTAD and UNDP for their continuing support in mobilizing the participation of developing countries. He noted the improved result achieved at the current session, with 102 developing countries participating. Of these, 92 countries had sent at least one representative from outside Geneva and it was estimated that about 80 countries would be supported by the special voluntary fund.

69. He underlined, however, that there were no funds available to finance participation in the fifth and resumed fifth sessions. The secretariat was therefore not able to commence offers of assistance. In order to maintain the current offer of support to one delegate from each of some 100 developing countries for the February and April sessions, some $US 950,000 would be needed, that is, $US 500,000 more than the amounts already pledged. If funding did not reach that level in time, it would be necessary to cut back, probably by restricting recipients to the least developed countries.

ANNEX II

CONSOLIDATED WORKING DOCUMENT

Note by the secretariat

1. This consolidated working document has been prepared by the secretariat under the guidance of the Chairman of the Committee and the Co-Chairmen of the Working Groups. It assembles, under a provisional list of headings, texts that are, in their view, indicative of the state of play in the two Working Groups at the end of their work at the fourth session. The document is intended to facilitate further work on the framework convention; it does not preclude the introduction of new elements.

2. The differing status of some of the texts emanating from Working Group I was described by the Co-Chairs in their report to plenary (see. paras. 48-58 of the report of the fourth session). Formal proposals by delegations on the subject of commitments, which were submitted late in the session and thus were not considered in Working Group I, are not included in this document (see A/AC.237/WG.I/L.7 and Corr 1 and 2, L.9 and Corr. 1 and L. 10 and Corr. 1.

3. The document was originally issued as A/AC.237/Misc.17 and Add. 1-9. The present Annex is an edited version thereof. In addition to presentational, grammatical and typographic editing, the following changes may be noted:

(a) The number and placement of brackets has been reviewed and some adjustments made.

(b) The preamble has been numbered to facilitate easy reference. These numbers will be deleted in due course. The paragraph numbering in Section IV.2 has been brought into line with the rest of the document.

(c) Sub-headings, intended to facilitate the identification of texts, have been retained in Sections V - VIII and in the Annexes and inserted in Section IV.2. It will have to be decided whether any such sub-headings should be kept in the final text.

(d) The text of Section IV includes a few substantive modifications requested by some delegations at or after the closing plenary meeting of the fourth session. These changes have been identified by footnotes.

CONTENTS

		Page
PREAMBLE		22
I.	DEFINITIONS (To be added subsequently)	26
[II.	PRINCIPLES]	27
[III.	OBJECTIVE]	30
IV.	COMMITMENTS	31
[IV.1.	General Commitments]	31
[IV.2.	Specific Commitments]	37
[IV.2.1	Stabilization and Reduction of Emissions and Enhancement of Sinks and Reservoirs]	37
[IV.2.2	Specific Commitments on Financial Resources]	41
[IV.2.3	[Technology Cooperation]/[Transfer of Technology]]	43
[IV.3.	Special Situations]	46
V.	COOPERATION ON SCIENCE, RESEARCH, INFORMATION AND EDUCATION	49
V.1.	Scientific [, Technological] and Technical Cooperation	49
V.2.	Research [and Development] and Systematic Observation	50
V.3.	Exchange of Information	52
V.4.	Education, Training and Public Awareness	53

Page

VI. INSTITUTIONAL ARRANGEMENTS 55

VI.1. Conference of the Parties 55

[VI.2. Executive Committee] 60

VI.3. Secretariat 62

[VI.4.] Advisory Committee on [Science] [Climate Change] [Climate Protection and Development] 64

[VI.5.] [Advisory] Committee on Implementation] 68

VI.6. [[Administrative] [Independent Funding] Mechanism for Financial Resources and Technology Transfer] [International Climate Fund] 73

[VI.7. Insurance] 80

VII. PROCEDURES 81

VII.1. Reporting 81

VII.2. [Resolution of Questions regarding Interpretation and Implementation of the Convention] [Settlement of Disputes]] 83

VII.3. Amendments to the Convention 90

[VII.4. Protocols] 92

VII.5. Adoption and Amendment of Annexes to the Convention 93

VII.6. Right to Vote 94

		Page
VIII.	FINAL CLAUSES	95
VIII.1.	Depositary	95
VIII.2.	Signature	96
VIII.3.	Ratification, Acceptance, Approval or Accession	97
VIII.4.	Entry into Force	98
VIII.5.	Reservations and Declarations	100
VIII.6.	Withdrawal	101
VIII.7.	Authentic Texts	102
[ANNEXES]		
[I.	[Research [Technological] [[and] Development] and Systematic Observation] [Technological and Scientific Research and Systematic Observation]]	103
[II.	Exchange of Information]	116
[III.	Reporting]	118
[IV.	Arbitration]	122
[V.	Insurance Mechanism]	126

PREAMBLE

The Parties to this Convention,

1. Acknowledging that [adverse] change in the Earth's climate is a common concern of humankind since a sustainable climate is an essential condition that helps to sustain life,

2. Concerned that [net] emissions resulting from human activities are substantially increasing the atmospheric concentrations of greenhouse gases, and that these increases will enhance the greenhouse effect, resulting on average in an additional warming of the Earth's surface and atmosphere and may adversely affect natural ecosystems and humankind, whilst noting that there are many uncertainties in predictions particularly with regard to the timing, magnitude and regional patterns of climate change,.

3. Aware that the adverse effects of such [potential] climate change [and measures to mitigate it] could have [serious] social, economic and environmental consequences,

4. Acknowledging that the global nature of such climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response in accordance with [their respective responsibilities and capabilities]/[the means at their disposal and their capabilities] and their social and economic conditions,

5. Recalling the pertinent provisions of the Declaration of the United Nations Conference on the Human Environment (Stockholm, 1972) and in particular principle 21 [which provides that "States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction" [and accordingly that environmental considerations should not be used as a pretext for interference in the internal affairs of developing countries],]

6. Recalling also the provisions of General Assembly resolution 44/228 of 22 December 1989 on the United Nations Conference on Environment and Development, and resolutions 43/53 of 6 December 1988, 44/207 of 22 December 1989 and 45/212 of 21 December 1990 on Protection of global climate for present and future generations of mankind,

7. Recalling further the provisions of General Assembly resolution 44/206 of 22 December 1989 on the possible adverse effects of sea level rise on islands and coastal areas, particularly low lying coastal areas and the pertinent provisions of General Assembly resolution 44/172 of 19 December 1989 on the Implementation of the Plan of Action to Combat Desertification,

8. Noting the Ministerial Declaration of the Second World Climate Conference adopted on 7 November 1990,

9. [Noting the significant contribution made towards combating activities that result in adverse effects on the Earth's climate by the Vienna Convention for the Protection of the Ozone Layer, adopted on 22nd March 1985, and the Montreal Protocol on Substances that Deplete the Ozone Layer, adopted on 16th September 1987 and adjusted and amended on 29th June 1990,]

10. Recognizing the need to strengthen international cooperation in addressing adverse effects of climate change [through the development within a global framework of appropriate policies [including the provision to developing countries of adequate, new and additional financial resources [based on assessed contributions by developed countries] and technology transfer on [preferential, concessional and non-commercial]/[fair and most favourable] terms], [the preparation of protocols on specific problems]/[the consideration of additional related instruments as may be agreed] and by means of increased research into atmospheric, terrestrial and marine ecology sciences as well as into the social and economic impacts of climate change and related response strategies, systematic observations, cooperation on scientific, technical, economic and legal matters and exchange of information],

11. Conscious of the valuable work being conducted by many States on global climate change and of the important contributions of the World Meteorological Organization, organs, organizations and bodies of the United Nations system as well as other international and intergovernmental bodies for the exchange of results of scientific research and coordination of research,

12. Recognizing the need for [all] countries [with excessively high per capita rates of anthropogenic carbon dioxide emissions] to take immediate action in a flexible manner on the basis of [short, medium and long term]/[clear priorities, as a first step towards] comprehensive response strategies at the global, national and [, where agreed, regional] levels which take into account all greenhouse gases, with due consideration of their relative contributions to the

enhancement of the greenhouse effect and recognizing also that strategies required to understand and address climate change will be environmentally, socially and economically most effective if they are based on relevant scientific, technical and economic considerations and continually re-evaluated in the light of new findings in these areas,

13. Aware of the role and importance of sinks and reservoirs in terrestrial and marine ecosystems, inter alia, in the absorption of greenhouse gases,

14. Recognizing that action to reduce emissions of greenhouse gases can also help in solving other environmental problems,

15. Affirming that response to climate change should be coordinated with social and economic development in an integrated manner with a view to avoiding adverse impacts on the latter, taking into full account the legitimate needs of developing countries which have at this time as their main priority the achievement of sustained economic growth and the eradication of poverty, and that therefore the promotion of economic growth in developing countries is essential to address the problems related to climate change,

16. Recognizing that the improvement of the international economic environment, thus promoting the economic growth and sustainable social and economic development, of developing countries, is [essential]/[a prerequisite] for enabling developing countries to participate effectively in the international efforts to address climate change,

17. Recognizing that all countries, especially developing countries, need access to [all the] resources required to achieve sustainable social and economic development and that in order to progress towards that goal, [the energy consumption of developing countries must grow, taking into account the need for greater energy efficiency]/[net emissions of developing countries must grow],

18. Conscious that countries with low lying coastal, arid and semi-arid areas or areas liable to drought and desertification, small island countries and countries with fragile mountainous ecosystems are particularly vulnerable to the potential adverse impacts of climate change and will therefore require special consideration under this Convention and its [subsequent protocols]/[related legal instruments],

19. [Acknowledging the specific transitional difficulties of those countries, particularly developing countries, whose economies are particularly dependent on fossil fuel

production, use and exportation, as a consequence of action taken on limiting greenhouse gas emissions and that these difficulties will need to be recognized in the development of protocols under this Convention,]

20. Bearing in mind the importance of integrating environmental concerns and considerations into policies and programmes in all countries [without introducing any form of conditionality in aid or development financing or constituting a pretext for devising new barriers to trade],

21. [Recognizing that climate policies should be as cost-effective as possible in order to ensure maximum benefits from measures undertaken,]

22. Determined to protect the atmosphere for present and future generations [on the basis of inter-generational as well as intra-generational equity],

Have agreed as follows:

I. DEFINITIONS

(To be added subsequently)

[II. PRINCIPLES

1. The right to development is an inalienable human right. All peoples have an equal right in matters relating to reasonable living standards. Economic development is the prerequisite for adopting measures to address climate change. The net emissions of developing countries must grow to meet their social and economic development needs.

2. All States have a duty to aim at sustainable development for the benefit of present and future generations. Protection of the global climate against human induced change should proceed in an integrated manner with economic development in the light of the specific conditions of each country, [without prejudice to the socio-economic development of developing countries]. Measures to guard against climate change should be integrated into national development programmes [taking into account that [evolving] environmental standards] valid for developed countries may have inappropriate and unwarranted social and economic costs in developing countries [and countries with economies in transition].

3. All States have an obligation to protect the climate [system] for the benefit of present and future generations of mankind on the basis of [inter-generational as well as intra-generational] equity. This obligation shall be carried out within different time frames for implementation in accordance with common but differentiated responsibilities and capabilities [between developing and developed countries] and taking fully into account that the largest part of emissions of greenhouse gases have been originating from developed countries and those countries have the main responsibility [and should take the lead] in combating climate change and the adverse consequences thereof.

Possible alternative to 3.

All inhabitants of the planet have an equal right to the atmosphere lying outside national jurisdiction. All States have an obligation to protect the atmosphere for the benefit of present and future generations of mankind on the basis of intra-generational as well as inter-generational equity. This common obligation to protect the atmosphere shall be equitably distributed between countries in accordance with developed and developing countries' common but differentiated responsibilities and capabilities and different time frames set out for implementation with a view to achieving convergence of anthropogenic carbon dioxide emissions at a common per capita level noting that the largest part of current emissions of greenhouse gases, both in historical and current terms, originates from developed countries, and that those countries [in the first instance have the main responsibility]/[shall take the lead] in combating climate change and the adverse effects thereof.

4. The Parties shall give full consideration to the specific needs and special circumstances of developing country Parties, especially those developing countries that are particularly vulnerable to the adverse consequences of climate change and also those developing countries which would have to bear a disproportionate or abnormal burden under the Convention.

5. In order [to achieve sustainable development in all countries and] to address the needs of present and future generations, precautionary measures to meet the climate challenge must anticipate, prevent, attack, or minimize the causes of, and mitigate the adverse consequences of, environmental degradation that might result from climate change. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing [cost-effective] measures to prevent such environmental degradation. The measures adopted should take into account different socio-economic contexts.

6. States shall promote an open and balanced multilateral trading system. Except on the basis of a decision by the Conference of the Parties which should be consistent with the GATT, no country or group of countries shall introduce barriers to trade on the basis of claims related to climate change.

7. Measures taken to combat climate change should not introduce trade distortions inconsistent with the GATT or hinder the promotion of an open and multilateral trading system.

8. Alternative A

The developed countries responsible for causing damage to the environment through inducing climate change should bear the primary responsibility for rectifying that damage and the cost of prevention measures and should compensate for environmental damage suffered by other countries or individuals in other countries.

Alternative B

Those countries directly responsible for causing damage to the environment through inducing climate change should bear the responsibility for rectifying that damage. By openly demonstrating their direct responsibility or negligence, those countries shall compensate for environmental damage suffered by other countries or individuals in other countries.

9. Climate policies should be cost-effective to ensure global benefits at lowest possible costs. To achieve this, climate policies should be comprehensive, include all relevant sources and sinks of greenhouse gases, comprise all economic sectors, and may be implemented in cooperation with other Parties.

10. The principle of the sovereignty of States shall be adhered to and strictly respected in all fields of international cooperation, including that for protection of the climate.

11. The need to improve the international economic environment for the developing countries and to promote their sustained economic development are prerequisites for enabling developing countries to participate effectively in the international efforts to protect the global environment including climate protection.]

[III. OBJECTIVE

The ultimate objective of the Convention and any related legal instruments that might be agreed upon is to achieve, in accordance with the principles set out in the above articles, stabilization of greenhouse gas concentrations in the atmosphere at a level which would prevent dangerous anthropogenic interference with climate. Such a level should be reached within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to permit economic activity to develop in a sustainable and environmentally sound manner.

[The anthropogenic emissions of greenhouse gases, particularly carbon dioxide, from States should converge at a common per capita level, taking into account net carbon emissions during this century as well as the economic needs of developing countries.]]

IV. COMMITMENTS

[IV.1. GENERAL COMMITMENTS]

1. In pursuance of the above global objective, and in accordance with their common but differentiated responsibilities and taking into account their specific national and regional development priorities [and objectives and circumstances]/[particularly emission levels per capita, modified as appropriate by other relevant factors] [such as:

- emission level per capita,
- emission level per unit of GDP,
- climatic conditions,
- availability of indigenous energy sources, particularly non-carbon energy sources such as solar, hydropower, biomass, etc.,
- industrial structure of the country,
- potential for improved energy efficiency and conservation,]

the Parties commit themselves to:

[(a) Implement suitable measures for the [control]/[effective limitation] of [net] emissions of all greenhouse gases [not controlled by the Montreal Protocol] and for the maintenance and enhancement of their sinks and reservoirs;]

(b) Develop, periodically update, and [publish] [report on] national inventories of sources and sinks of all greenhouse gases not controlled by the Montreal Protocol [using a methodology to be considered at the first meeting of the Conference of the Parties with a view to reaching agreement on it];

[(c) Alternative A
Formulate, implement, publish and regularly update and report on, in the light of periodically re-evaluated scientific, technical and economic information and considerations, [cost effective and otherwise] appropriate national [and as appropriate][1] [or] regional programmes and strategies which are considered necessary by the particular Party or group of Parties with regard to the control

[1] Insertion

of greenhouse gas emissions, conservation and enhancement of sinks and reservoirs as well as strategies considered by the Party or group of Parties to facilitate adaptation to climate change [and] to mitigate the causes and adverse effects of climate change, including preventive measures which can be beneficial for reasons other than climate change. The Parties should formulate such programmes and strategies in accordance with Annex ..;]

[Alternative B

Formulate, implement, publish and regularly update in the light of scientific, technical and economic information, national and as appropriate regional programmes and measures

- to combat climate change
- to facilitate adaptation to climate change

taking into account paras. ... Parties should formulate such programmes and measures in accordance with Annex..;]

[(d) [Give priority to]/[Promote the necessary research for] clearing the remaining uncertainties regarding causes and effects of climate change and regarding the economic and social consequences of alternative response strategies and [promote]/[promoting] the development and diffusion of environmentally sound and safe technologies including innovative technologies for [improving energy efficiency aimed at] limiting greenhouse gas emissions;]

[(e)[2] Alternative A

In addressing the effective limitation of greenhouse gas emissions the Parties shall develop, adopt and update environmentally sound policies in all relevant sectors to:

(i) Promote energy conservation, energy efficiency and the use of cost-effective energy efficient technology;

(ii) Develop and use low carbon fuels and environmentally sound and safe CO_2 zero emission technologies, in particular new and renewable energy sources;

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2 New text to replace original text in A/AC.237/Misc. 17/Add 1.

(iii) Promote environmentally sound transport systems;

(iv) Promote energy efficiency in products, including motor vehicles and processes, through mandatory standards or voluntary agreements, or other appropriate measures;

(v) Promote development, diffusion and use of innovative environmentally sound technologies;

(vi) Encourage environmentally sound consumer practice through public information programmes;

(vii) Encourage improved waste management practices;

(viii) Promote sustainable agricultural and land use practices;]

[Alternative B

Promote, taking into account the specific conditions of each country, [mitigative]/[cost effective] measures to limit greenhouse gas emissions in all sectors of the economy. [In the specific case of energy use, promote sustainable energy conservation, rational use of energy, energy efficiency and development and use of environmentally sound and economically feasible new and renewable energy sources that [minimize]/[control] the emissions of greenhouse gases taking into account the particular conditions of each country;]]

[Alternative C

Cooperate in development and application of requisite technologies and practices, including improvement of energy efficiency, safe renewable energy sources as well as in the protection and enhancement of sinks and reservoirs of greenhouse gases, in taking measures against soil loss with the priority aim of halting and reversing desertification, and in training of personnel;]

[(f)[3] Promote the conservation, sustainable management and enhancement of sinks and reservoirs of greenhouse gases in terrestrial and marine ecosystems [by

(i) taking measures against desertification, deforestation and forest destruction, where appropriate, with the primary aim of combating desertification and stabilizing the forest area and secondly increasing further the forest area;

[(ii) promoting overall health of ecosystems by counteracting the threats posed by, inter alia the emission of harmful pollutants and non-sustainable practices;]

(iii) taking measures against the degradation of ecosystems with the purpose of increasing their potential to act as sinks and reservoirs of greenhouse gases;

(iv) taking measures to protect the chemical balance of the atmosphere to maintain its ability to act as a sink for greenhouse gases other than carbon dioxide, such as methane];]

[(g) Make preparations for adaptation to the impacts of climate change; develop [and elaborate] appropriate and integrated plans for coastal zone management, water resources and agriculture including emergency procedures, coastal zone response mechanisms and adaptation strategies in sectors such as land use planning, agriculture and fragile ecosystems [and a global ocean observing network]; and undertake assessments of the resilience and adaptability of resources;]

(h) [Alternative A

(i) conduct impact assessments to ensure that measures taken to combat climate change or to adapt to climate change minimize adverse social, health, economic and environmental effects;

(ii) ensure that climate change considerations are taken into account in social, economic and environmental policies and actions;]

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[3] The original Alternative A of paragraph (f) has been deleted. Alternative B has been retained as the new paragraph (f), with the addition of the last sub-paragraph of the former Alternative A, which becomes the new sub-paragraph (iv).

Alternative B

Conduct timely, nationally formulated and determined, project-related socio-economic and environmental impact analysis of actions proposed for the purpose of addressing climate change with an emphasis on poverty eradication in developing countries, in particular least developed countries;

(i) Alternative A

Promote and cooperate in systematic observations, research and information exchange on climate in order to improve scientific knowledge and better understand and assess the effects of human activities on climate and the environmental and socio-economic impact of climate change and the response strategies required to deal with such change and in order to identify the carbon cycle in terrestrial ecosystems, the role of soils, biomass (including agricultural crops), forests, different bodies of water and coral reefs as sources, sinks and reservoirs for greenhouse gases, in collaboration with relevant international organizations. The Parties shall make the results of systematic national, regional and global observations and evaluations available to all interested Parties;

Alternative B

Promote and cooperate in research, systematic observations and information exchange on the climate system, in accordance with the provisions in Articles ... and Annex ..;

(j) [Alternative A

Encourage the promotion of public education and awareness of the interrelations of energy production and consumption and the environment, of opportunities for individuals and the private and public sectors to reduce energy-related environmental impacts, of the benefits and opportunities for a rational use of energy and energy conservation, of the activities contributing to the build up of greenhouse gas emissions and of the environmental and socio-economic impacts of climate change, as well as of the need to control greenhouse gas emissions and of the specific role of forests, and promote the broadest possible participation in these activities, including participation by non-governmental organizations and indigenous peoples;]

Alternative B

Promote public education and awareness on climate change, its impacts and response measures, and encourage the widest possible participation in the process, including by non-governmental organizations, in accordance with Article...;

[(k) Develop, coordinate and, as appropriate, harmonize, in order to avoid distortions to international trade and in accordance with the GATT and the provisions of Annex .., relevant economic and administrative instruments [, such as subsidies, taxes and charges, as well as other relevant instruments] aimed at [limiting]/[controlling] net emissions of greenhouse gases;]

[(l) Identify harmful national practices and policies which protect, subsidize or otherwise encourage activities which lead to greater levels of global emissions than would otherwise occur.]]

[IV.2. SPECIFIC COMMITMENTS]

[IV.2. 1 Stabilization and Reduction of Emissions and Enhancement of Sinks and Reservoirs]

Differentiation

[(a) The Parties shall establish a system of categories of countries in order to implement the principle of common but differentiated responsibility. Furthermore they agree to review the implementation of that system regularly. The categories are set out in Annex ...

Stabilization of Emissions

(b) Alternative A

The [developed country Parties as defined in Article ..]/[Parties, in particular the developed country Parties] individually or jointly shall as a first step [commit themselves to the stabilization of]/[make best efforts to stabilize]

Alternative A1

[net] emissions of anthropogenic carbon dioxide [and other greenhouse gases other than those controlled by the Montreal Protocol] in general at the 1990 levels by the year 2000. [The details of this commitment should be elaborated in an Annex.]

Alternative A2

net emission of greenhouse gases as soon as feasible, recognizing differences among countries in a number of respects.

Alternative B

The developed country Parties shall commit themselves to substantial action on the enhancement and protection of greenhouse gas sinks and limitation of [net] emissions of greenhouse gases, aiming in particular, as a first step at a stabilization, individually or collectively, of carbon dioxide emissions in general by:

Alternative B1

the year 2000 at 1990 levels, taking into account the differences among countries in a number of respects in their starting points and approaches.

Alternative B2

(i) the year 2000 at 1990 levels; or

(ii) such earlier time and at such lower level as may be agreed by the Conference of the Parties acting with consideration for the best available scientific knowledge, as agreed by the Advisory Committee on [Science].[4]

Reduction of Emissions

(c) Alternative A

The developed country Parties shall [make efforts]/[commit themselves] to take immediately steps towards reducing emissions of all anthropogenic carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol [between the years 2005 and 2010]/[as early as possible]/[after the year 2000]/ [by the year 2000] [and as a first step shall reduce such emissions by 25% by the year 2010, using 1990 as the base year] taking into account the most authoritative scientific advice available and setting targets to limit and reduce all emissions of greenhouse gases.

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[4] See Section VI.4 for possible titles of committee.

Alternative B

The developed country Parties shall commit themselves to continue negotiations towards reducing emissions of all greenhouse gases, other than those already controlled by the Montreal Protocol, taking into account the most authoritative scientific, social and economic advice available and based on a programme of targets and schedules agreed on internationally.

Alternative C

As part of the elaboration of a protocol on greenhouse gas emissions, in particular carbon dioxide, reduction and/or further limitation targets for emissions of carbon dioxide and other greenhouse gases should be explored, including possible strategy options aimed at progressive reductions and/or further limitations at the horizon 2005 and 2010. In this context also an agreement on measures for limitation or reduction of methane emissions in the energy and waste sectors should be considered as a priority.

Alternative D

The implementation of emission targets shall be reviewed before the year 2000 and new targets formulated for further 10 year periods until the objective of this Convention is met.

(d)[5] In order to meet the emission targets, the Parties shall commit themselves to measures to limit and reduce greenhouse gas emissions in accordance with the criteria for the distribution of commitments among countries set out in Annex .. to the Convention.

[5] Sub-paragraphs (d), (e) and (f) were formerly placed immediately following sub-paragraph (b).

(e) Decisions to base limitations and reductions of greenhouse gas emissions on the concept of net emissions shall be based on the best available scientific knowledge, as agreed by the Advisory Committee on [Science].[6]

(f) The commitments may be implemented on a comprehensive carbon dioxide equivalent basis according to criteria set out in Annex .. to the Convention. All measurable limitations and reductions of net greenhouse gas emissions shall be credited to a Party's commitments under this Convention in accordance with the best available scientific knowledge, as agreed by the Advisory Committee on [Science][6].

Enhancement of sinks and reservoirs

(g) The Parties shall commit themselves to enhance sinks and reservoirs inter alia by:

- implementing, where appropriate, site-based afforestation and reforestation programmes;

- developing measures with regard to other sinks and reservoirs of greenhouse gases, such as oceans and seas;

Crediting

[(h) A party which, using internationally accepted methods, can demonstrate that, as a result of human activities after 1990 the capacity of ecosystems within its territory to act as sinks of greenhouse gases has increased, has the right to credit an amount equivalent to the annual average of this increase when calculating its emission level.]

Joint implementation

(i) Alternative A

The [developed country] Parties shall have the option to implement specific emission [reduction] commitments individually or jointly in

[6] See Section VI. 4. for possible titles of committee.

cooperation with [another]/[one or more other]/[developing country] [Party]/[Parties] on the basis of equity and common but differentiated responsibility. This cooperation may take place on a bilateral, regional and global level. [When Parties cooperate in implementing [reduction] commitments, the [net reduction in emissions]/[result] shall be credited to [their respective]/[the] commitments of the former under this Convention for a specific period of time, in accordance with agreements between the cooperating Parties, [and subject to criteria approved by the Conference of the Parties.]]

Alternative B (relates to para (c) Alternative C above)

Parties making commitments in such a protocol should be able to establish bilateral, regional or global cooperation to achieve these commitments. The Conference of the Parties should establish the appropriate framework, criteria and modalities in order to provide the possibility of such cooperation.]

[IV.2. 2 **Specific commitments on financial resources]**

[(a) The developed country Parties and other Parties in a position to do so [shall commit adequate [new] and additional]/[will] [may] provide on a voluntary basis] financial resources [additional to the ones that are disbursed for development at the time of the signing of the Convention], and [separate from development aid budgets] to enable [developing country] Parties to meet the [full]/[agreed] incremental costs as elaborated upon in Annex .. required to fulfil the commitments under the Convention and [ensure]/[facilitate]/[promote] the expeditious transfer of [environmentally safe and sound]/[appropriate] technologies to developing country Parties to improve and develop their indigenous technology on a [fair and most favourable]/[preferential, concessional and non-commercial] basis.

(b) Alternative A

[At its first meeting, the Conference of the Parties]/[The Parties]shall[create]/[identify by (...)] an [International]/[Multilateral] [Climate Fund] [specific to this Convention] to expeditiously mobilize adequate, [new and additional] financial resources from [developed country Parties and other] Parties [who would wish to contribute]/[in a

position to do so], in accordance with an agreed scale of assessment, for [developing country Parties]/[other Parties with demonstrated needs]/[Parties meeting agreed criteria] in order to:

Alternative B

The Parties [will]/[may][7] through the agreed financial mechanism, where appropriate, assist the developing country Parties to:

(i) implement [all]/[specific][7] commitments under the Convention;

[(ii) adapt to and mitigate the adverse effects of climate change in accordance with their national development plans, priorities and objectives, and compensate the social and economic imbalances that result from the implementation of the Convention;

(iii) provide assured access to appropriate environmentally [safe and] sound "state-of-the-art" technologies;

(iv) complement their efforts to create and develop their endogenous capacities in scientific and technological research and development, systematic observations and information directed at combating climate change;

(v) strengthen operative institutional capacities for dealing with climate change, including human resources development;

(vi) promote research on emission control of the greenhouse gases from existing activities especially in the energy, transport, agriculture and industrial sectors;

(vii) conduct research and pilot projects on the enhancement of natural greenhouse gas sinks including afforestation of deserts and other ecosystems, halophyte afforestation and expansion of coral reefs and oyster bank ranges.]

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[7] Insertion

[(c) The fund shall operate under the authority of the Conference of the Parties [and shall be distinct and independent from other funds and international financial institutions]/[who shall decide on its overall policies and shall be administered as a Trust Fund by the Global Environment Facility of World Bank/UNDP/UNEP.]]]

[IV.2. 3 [Technology Cooperation]/[Transfer of Technology]]

[[Consistent with the objective of the established fund:]

(a) The Parties shall take [every practicable] step[s], consistent with their national laws, regulations and practices to [ensure]/[facilitate]/[promote] the expeditious transfer either directly or through competent intergovernmental bodies of requisite [environmentally safe and sound]/[appropriate] technologies so as to enhance the ability of [the developing countries Parties]/[Parties which meet agreed criteria defined in Annex ..] to meet their technological needs in [implementing]/[meeting] their stated commitments under the Convention.

(b) The Parties shall, for the purpose of implementing commitments under the Convention [cooperate in promoting]/[promote], consistent with their national laws, regulations and practices and taking into account the particular needs and indigenous technologies of developing country Parties, directly or through competent intergovernmental bodies, the development and transfer of environmentally safe and sound technology and knowledge. Such cooperation shall be carried out particularly through:

(i) supporting the development of endogenous capacity building in developing countries through, inter alia, the development of human resources and the strengthening of institutional capacities in research and development, in accordance with the plans, objectives and priorities of these countries;

(ii) Alternative 1

provision of information on [appropriate]/[up to date environmentally safe and sound] technologies [and equipment, including supply of special manuals or guides] to other Parties;

Alternative 2

ensuring the access of developing countries to scientific and technological information, in particular in state-of-the-art technologies, through the establishment of an international database, based on regional and national centres, easily accessible by potential users, and to information related to technological options, trading conditions, implementation costs, and technologies security;

(iii) supply of necessary equipment and facilities for research and development and systematic observation;

(iv) appropriate training of scientific, technical and managerial personnel in the technologies, equipment and installations referred to in para (iii) above;

(v) development of environmentally sound technologies in the public domain;

(vi) assistance to developing countries in building up their endogenous capacities and skills in scientific and technological research and development;

(vii) financial incentives provided by developed countries to encourage exports of environmentally sound technologies to developing countries;

(viii) appropriate means to prevent monopolistic practices in transfers of environmentally sound technologies;

(ix) support for the development of policies in the public sector, e.g. with regard to energy, transport, infrastructure and city planning.

[(c) Compliance with this Convention by developing country Parties will be dependent upon the effective implementation of the provisions of this Convention on financial resources and transfer of technology.]

(d) [Alternative A

Non-compliance procedure and [intellectual property] rights should not be applied against developing country Parties if patented technology mandated by conventions is not accessible to them.]

[Alternative B

Intellectual property rights shall not be a barrier to compliance with this Convention by developing country Parties.]]

[IV.3. SPECIAL SITUATIONS]

1. The Parties shall give full consideration to the specific needs, including the transfer of technology and funding, of developing country Parties especially

(a) countries vulnerable to sea level rise such as:

- small island countries,

- countries with low lying coastal areas;

(b) countries with potential adverse change in precipitation, such as those with:

- arid and semi-arid areas;

(c) countries with potential adverse change in meteorological conditions, such as those with:

- areas prone to natural disasters including tropical cyclones, flooding and erosion,

- areas liable to drought and desertification,

- high urban atmospheric pollution;

(d) countries with fragile ecosystems, including mountainous ecosystems, in order to enable them to adapt to and combat the potential [adverse]/[undesirable] effects of climate change.

[2.[8] The Parties shall develop and adopt a "green plan" with appropriate emergency measures and mechanisms for the protection and recovery of fragile ecosystems, particularly arid and semi arid areas affected by drought and desertification in Africa, in order to limit their vulnerability to climate change.]

3. The developed country Parties shall take full account of the specific needs and special situations of the least developed countries in their action with regard to funding and transfer of environmentally safe and sound technology.

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[8] New text

4. The Parties shall give special consideration, in the implementation of the commitments of the Convention, and in the adoption of concrete measures to the situation of the [Parties particularly the] developing country Parties whose economies are highly dependent on fossil fuels, [either because they are not in a position to use]/[and assist them in order to facilitate their use of] substitutes for such fuels, [or do not possess the]/[increase their] flexibility to switch to non-fossil fuels, [or because of]/[and over time, reduce] their high dependency of income upon the production, exportation, or consumption of fossil fuels and associated energy intensive products.

5. Alternative A

The Parties recognize that in the implementation of the commitments of the Convention an adequate degree of flexibility to stabilize their economy and modernize their industry and agriculture has to be given to countries with economies in transition.

Alternative B

The Parties recognize that in the acceptance and the implementation of the commitments of the Convention, a certain degree of flexibility has to be given to countries with limited economic resources, in particular, to countries which are in the process of stabilizing their economies, to enhance their ability to cope with the effects of climate change.

[6. The developed country Parties shall set up an international insurance pool to provide financial insurance against the consequences of sea level rise to compensate the most vulnerable small island and low lying coastal developing countries against sea level rise.]

Alternative to section IV.3

The Parties shall give full consideration to the specific needs of the following groups of Parties, particularly, the developing country Parties, in undertaking actions to combat the adverse consequences of climate change and in the transfer of financial resources and technology:

(a) small island developing countries;

(b) low lying coastal areas;

(c) arid and semi-arid areas;

(d) areas prone to natural disasters;

(e) areas liable to drought, desertification and high urban atmospheric pollution;

(f) areas with fragile ecosystems including mountainous ecosystems;

(g) countries whose economies are highly dependent on fossil fuels, either because they are not in a position to use substitutes for such fuels or do not possess the flexibility to switch to non-fossil fuels, or because of their dependency upon the production, exportation or consumption of fossil fuels and associated energy intensive products;

(h) least developed countries; and

(i) countries with economies in transition.

V. COOPERATION ON SCIENCE, RESEARCH, INFORMATION AND EDUCATION

V.1. SCIENTIFIC [,TECHNOLOGICAL] AND TECHNICAL COOPERATION

Cooperation

1. The Parties shall cooperate [, on a global and regional level,] in the development and dissemination of scientific, [technological,] technical, socio-economic and legal knowledge relevant to [uncertainties surrounding] climate change, and the potential responses thereto, through research [and development] and systematic observation, exchange of information and education, training and public awareness. [Such cooperation shall be carried out with due respect to national sovereignty and shall be consistent with national laws, regulations and practices.]

Developing countries

2. The Parties shall take into account the particular concerns and needs of developing countries and [seek to] [promote] [improve] [the] [their] capacity and capability [of all Parties] to participate in these cooperative efforts.

Minimize duplication

3. The Parties shall also seek to minimize duplication of [these cooperative] effort[s] by utilizing, where [possible] [appropriate], existing competent international and intergovernmental bodies.

V.2. RESEARCH [AND DEVELOPMENT] AND SYSTEMATIC OBSERVATION

Cooperation

1. The Parties [shall] [undertake [in accordance with their needs and the means at their disposal] to initiate] [promote] and cooperate in, directly or through competent international and intergovernmental bodies [,as decided by the Parties,] the conduct of research [and [technological] development] and systematic observation related to the climate system and climate change [as elaborated in Annex I].

National Jurisdiction

[2. Within areas under its jurisdiction, [Within its scientific means,] [and, where appropriate, within the framework of established international climate and research programmes,] each Party shall [undertake] [within their capabilities] research [and development] and systematic observation [in accordance with the means at their disposal].] [Parties that do not have the indigenous capability to undertake research and development will be ensured assistance as articulated in Article V.1. (Scientific [, Technological] and Technical Cooperation).]

Beyond National Jurisdiction

[3. [In areas beyond national jurisdiction[s],] the Parties shall encourage cooperation in research [and development] and systematic observation, taking into account [relevant laws] [and activities] [and existing programmes] at both the national and international levels. Special measures shall be implemented to promote [equal] [full and open] access to data obtained [from these areas].

Strengthen Networks and Capacity

4. The Parties shall [implement measures, including] support [for] international and inter-governmental efforts [of competent bodies as decided by the Parties] to strengthen the observational networks and data collection and research capacities, particularly in developing countries, [and shall contribute to the development of an integrated global climate observing system built upon existing cooperative international meteorological and oceanographic observing systems].

[Possible Alternative to Articles V.1. and V.2.

SCIENTIFIC AND TECHNICAL RESEARCH, SYSTEMATIC OBSERVATION AND COOPERATION

1. The Parties shall initiate and cooperate in, directly or through competent international and intergovernmental bodies, scientific and technical research and systematic observation related to the climate system and climate change as elaborated in Annex I.

2. Within areas under its jurisdiction, each Party shall be responsible for undertaking scientific and technical research and systematic observation.

3. The Parties shall take into account the particular concerns and needs of developing countries and seek to promote the capacity and capability of all Parties to participate in these cooperative efforts.

4. The Parties shall support international and intergovernmental efforts to strengthen the observational networks and data collection as well as scientific and technical research capacities particularly in developing countries.

5. The Parties shall also seek to minimize duplication of effort in research and systematic observation by utilizing, where possible, existing competent international and intergovernmental bodies.]

V.3. EXCHANGE OF INFORMATION

In order to achieve the objective of the Convention, the Parties [shall] [may] facilitate and encourage, [taking into account the special circumstances of developing countries,] directly or [, as far as possible,] through [existing] competent international and intergovernmental organizations, full [, open] and timely exchange of relevant scientific, technological, technical, socio-economic and legal [available] information [as described in Annex II]. [The Parties recognize that cooperation under this Annex has to be consistent with national laws, regulations and practices regarding patents, trade secrets and protection of confidential and proprietary information.]

V.4. EDUCATION, TRAINING AND PUBLIC AWARENESS

Promotion

1. In order to increase the understanding of climate change [and the uncertainties surrounding it] and to facilitate appropriate responses, the Parties shall promote education, training and public awareness related to climate change.

National

2. At the national [and/or regional] level and in accordance with [national laws and regulations] [the means] at their disposal, the Parties shall promote and facilitate:

(a) The development and implementation of education and public awareness programmes on climate change;

(b) Public access to information on climate change;

(c) Public participation in addressing climate change issues and developing appropriate responses; and

(d) Appropriate training of scientific, technical and managerial personnel.

International

3. At the international level, using existing organizations, institutions and channels where appropriate, the Parties shall cooperate in and promote:

(a) The development and exchange of educational and public awareness material on climate change; and

(b) The development and implementation of education and training programmes, including the exchange or secondment of personnel, in particular for developing countries.

[Alternative to paragraph 3(b)

(b) The development and implementation of education and training programmes should be carried out by:

(i) Providing courses and skills particularly to developing countries in the developed countries' institutions in the short and medium term;

(ii) In the long term, assist developing countries to build such institutions on their own; and

(iii) Exchange or secondment of personnel to train experts in this field in the developing countries.]

VI. INSTITUTIONAL ARRANGEMENTS

VI.1. CONFERENCE OF THE PARTIES

1. A Conference of the Parties is hereby established. [It shall be the highest authority under the Convention.] [[Any] [All] other bodies established by or under the Convention shall be subsidiary to the Conference of the Parties.]

2. The Conference of the Parties shall keep under [continuous] review the implementation of this Convention and any [protocols] [other related legal instruments that may be agreed upon] and make [,within its mandate provided in this Article,] the decisions necessary to [ensure] [promote] the effective [operation] [implementation] [and as necessary the future development] of the Convention. To this end, it shall, [inter alia,]:

(a) [Periodically examine] [Review [and revise, as necessary,]] [in the light of the experience gained, in the implementation of the Convention and of the evolution of scientific knowledge] in accordance with Article [VII.3.] (Amendments), the [objectives of the Convention] [the efficiency of measures taken, the obligations of the Parties and the institutional arrangements provided for under the present Convention and recommend improvements where it deems necessary];

[(b) Assess and review the implementation of the [obligations] [operation] of the Convention [and its protocols];]

[(c) Consider the information submitted in accordance with Article [VII. 1.] (Reporting) [to assess the totality of the global response] [and review the mechanisms and timetables for its transmission];]

[(d) Consider reports from subsidiary bodies [and take such actions as it deems necessary in accordance with the functions described in Article [VI.3.] (Secretariat), Article [VI.4.] (Advisory Committee on Science), Article [VI.5.] (Committee on Implementation), and Article [VII. 1.] (Reporting)];]

[(e) Publish regular reports on the progress in implementing the objectives of the Convention;]

[(f) Provide [policy direction and operational guidelines] [guidance] [rules] to the [administrative mechanism] for financial resources and [environmentally safe] technology transfer [, including establishing criteria and priorities and selection of projects,] provided for in Article [VI.6] (Administrative Mechanism);]

[(g) Establish criteria under which the [administrative] mechanism for financial resources and [environmentally safe] technology transfer will develop ["global accounting credit standards"] for contributions of technology;]

[Alternative to (g)

Establish criteria for joint implementation of commitments by Parties in accordance with Article xx (Joint Implementation) and Article [VI.6.] (Administrative Mechanism);]

[Alternative to (f) and (g)

Provide policy direction and establish criteria for the functioning of the [administrative] mechanism for financial resources and technology transfer;]

[(h) Consider and decide upon questions of interpretation and implementation of the Convention in accordance with Article [VII.2.] (Alternative A) (Resolution of Questions);]

(i) [Seek] [[Request] and utilize] the [services and] cooperation of, and utilize the information provided by, [competent] [appropriate] [specialized] international [organizations] and intergovernmental [and non-governmental] bodies;

(j) Review [periodically] [the evolution of the Earth's climate and the effects of measures taken under this Convention (and its protocols) on the basis of] relevant scientific, [environmental], technological, technical, legal and socio-economic information relating to [climate change and climate change response strategies] [the climate system and its changes] [and draw up conclusions [synthesis reports] on the subject];

(k) [Promote] the coordination [[or [as appropriate] harmonization] of [appropriate] policies, strategies and measures] [of programmes] to address [the adverse consequences of] climate change, taking into account the [differing circumstances] [respective responsibilities and capabilities] of Parties to the Convention;

[Alternative to (k)

Ensure intensive exchange of information concerning policies, strategies and measures to address climate change in order to avoid the offsetting of the policies, strategies and measures due to their incompatibilities;]

[(l) [Seek to] mobilize [new and additional] financial resources [for meeting the full incremental costs] with a view to [ensuring] [promoting] [the full implementation] of the obligations of the Convention;]

(m) Promote public awareness of the climate change issue;

(n) Consider and [where appropriate] [recommend] [adopt] programmes for research [and development] and [systematic observation [of climatic changes], exchange of information, education, training and public awareness, and scientific, technological [socio-economic] and technical cooperation] [including endogenous capacity building and technology transfer] [in accordance with Article [V.2.] (Research [and Development] and Systematic Observation), Article [V.3.] (Exchange of Information) and Article [V.4.], (Education, Training and Public Awareness)];

[Alternative to (n)

Consider questions related to research and development and systematic observation, exchange of information, education, training and public awareness, and scientific, technological and technical cooperation, and seek advice on these from relevant international and intergovernmental bodies;]

(o) Establish [any] such subsidiary bodies [[,including any body] to coordinate its activities when it is not in session], as are deemed necessary for the implementation of this Convention;

[(p) Agree upon and adopt [its] [for itself and for any subsidiary bodies] rules of procedure and any amendments thereto, by consensus;]

[(q) Consider and decide [by consensus] upon financial and budgetary matters for this Convention, including the financial rules and provisions governing its operation and that of its subsidiary bodies and the secretariat;]

[Alternative to (p) and (q)

Agree upon and adopt by consensus rules of procedure and financial rules for itself and for any subsidiary bodies that are established by or under the Convention;]

(r) Consider and adopt, as may be agreed upon, [by consensus] in accordance with the relevant articles, amendments to this Convention, additional Annexes and amendments of Annexes to this Convention;

(s) Consider, [and adopt as may be agreed in accordance with Article [VII.4.] (Protocols),] any protocol[s] to this Convention;

[(t) Consider any amendment to such protocol[s], additional annexes and amendments of annexes to any protocol[s], and, if so decided, [by consensus] recommend their adoption to the Parties to the protocol[s] concerned;]

(u) Make recommendations on any matters necessary for the efficient [operation] [implementation] of the Convention; and

(v) Exercise such other functions and powers as are conferred on it by this Convention [or are required for the achievement of its purposes].

Decisions by the Conference of the Parties

[3. The Conference of the Parties shall make every effort to take its decisions under the Convention by [consensus] [general agreement], [unless otherwise expressly provided for]. If all efforts at [consensus] [general agreement] have been exhausted, decisions [on substantive issues] shall, as a last resort, be taken by a [two-thirds] [three-quarters] majority vote of the Parties present and voting.]

Meetings

[4. The first meeting of the Conference of the Parties shall be convened by [insert name of the secretariat designated on an interim basis under the Article on the secretariat] not later than one year after entry into force of this Convention. Thereafter, ordinary meetings of the Conference of the Parties shall be held [annually] [every two years] unless otherwise decided by the Conference.]

5. Extraordinary meetings of the Conference of the Parties shall be held at such other times as may be deemed necessary by the Conference, or at the written request of any Party, provided that, within [three] [six] months of the request being communicated to the Parties by the secretariat, it is supported by at least [one third] [one half] of the Parties.

Observers

[6. The United Nations, its specialized agencies and the International Atomic Energy Agency, as well as any State not Party to this Convention, may be represented at meetings of the Conference of the Parties as observers. Any other body or agency, whether national or international, governmental or non-governmental, competent in matters covered by the Convention that has informed the secretariat of its wish to be represented at a meeting of the Conference of the Parties as an observer may be admitted [according to the Rules of Procedure] [unless at least one third of the Parties present object]. [The [admission and] participation of observers shall be subject to the rules of procedure adopted by the Conference of the Parties.]]

[VI.2. EXECUTIVE COMMITTEE

Composition

1. An Executive Committee is hereby established. It will be composed of [fifteen] [thirty] members representing all the Parties and elected by the Conference of the Parties by a majority of the Parties present and voting. The members shall be Government representatives [who are experts on matters related to climate change], designated on the basis of equitable geographical constituencies. [Each member shall be elected for a period of four years]. Their mandate shall expire at the following ordinary meeting of the Conference of the Parties. The Executive Committee shall meet [in . . .] [at the location of the secretariat] at intervals to be decided by the [Committee] [Conference of the Parties]. It shall take its decisions in accordance with rules of procedure to be adopted by the Conference of the Parties.

Functions

2. The Executive Committee is the executive organ of the Conference of the Parties. It shall in particular:

(a) Ensure the implementation of the decisions of the Conference of the Parties, as instructed by the latter;

(b) Prepare the deliberations of the Conference of the Parties;

(c) Oversee the dissemination of information to all Parties about measures taken by other Parties on the basis of reports submitted in accordance with Articles ---;

(d) Establish, after a review of national reports submitted in accordance with Articles ---, a report on the implementation of the Convention by the Parties and draft recommendations to be considered by the Conference of the Parties;

(e) Prepare an evaluation of the cumulative effects of the measures taken in respect of the objectives of the Convention;

(f) Seek to establish at each stage of the review process, a close dialogue with the Parties concerned and to come to consensual solutions on questions that may arise;

(g) Oversee and give additional guidance, within the framework of the decisions of the Conference of the Parties, to other subsidiary organs of the Convention [and especially to the financial mechanism of the Convention]; and

(h) Carry out any other function the Conference of the Parties may confer on it.

Annual report

3. The Executive Committee shall, with the assistance of the secretariat, prepare an annual report on the implementation of the Convention and propose the measures it deems appropriate to the Conference of the Parties. This report shall be transmitted to all Parties by the secretariat. The Conference of the Parties shall decide whether the report is to be published.

4. [Meetings: text to be drafted.]

5. [Election of Officers: text to be drafted.]

6. [Establishment of Ad hoc Panels: text to be drafted.]]

VI.3. SECRETARIAT

Establishment

[1. A secretariat is hereby established to service the Conference of the Parties and [its] [any] subsidiary bodies.]

Functions

2. The functions of the secretariat shall be:

(a) To arrange for and service meetings provided for in Articles [VI.1 (Conference of the Parties)], [VI. 4. (Advisory Committee on [Science] [Climate Change] [Climate Protection and Development])], [VI. 5. ([Advisory] Committee on Implementation)] [VII. 2. (Resolution of Questions), [VII. 3 (Amendments to the Convention)], [VII. 4. (Protocols)] and [VII. 5 (Adoption and Amendment of Annexes to the Convention)];

(b) To [prepare and] [compile and] transmit reports based upon information received in accordance with Articles [V. 3.] and [VII.1] (Exchange of Information and Reporting), as well as upon information derived from meetings of [any] subsidiary bodies [that might be established];

[(c) To prepare reports on its activities carried out in the implementation of its functions under the Convention and present them to the Conference of the Parties;]

[Alternative to (c)

To register, process and coordinate information as decided by the Conference of the Parties with a view to providing the necessary information support to the Conference of the Parties in its task of implementing the Convention;]

[(d) To provide assistance in the compilation of national reports;]

(e) To ensure the necessary coordination with relevant [international] [and intergovernmental] bodies;

(f) To enter into such administrative and contractual arrangements as may be required for the effective discharge of its functions [and as authorized by the Conference of the Parties];

(g) To perform the functions assigned to it by any [protocol to the Convention] [other related legal instrument that might be agreed upon]; and

(h) To perform such other functions as may be determined by the Conference of the Parties.

Designation of interim secretariat

3. The secretariat functions will be carried out on an interim basis by the ad hoc secretariat established under resolution 45/212 of 20 December 1990 of the General Assembly of the United Nations until the completion of the first ordinary meeting of the Conference of the Parties held pursuant to Article [VI. 1.] (Conference of the Parties). At its first ordinary meeting, the Conference of the Parties shall designate a secretariat. [At this meeting the Conference of the Parties shall evaluate the implementation by the interim secretariat of the functions assigned to it.]

[VI.4 ADVISORY COMMITTEE ON [SCIENCE] [CLIMATE CHANGE] [CLIMATE PROTECTION AND DEVELOPMENT]

Establishment

1. A [multi-disciplinary] Advisory Committee on [Science] [Climate Change] [Climate Protection and Development] is hereby established.

[The Conference of the Parties, at its first meeting, shall consider and decide the structure and operational matters of this Committee, including provisions on its membership, meetings and election of officers].

Functions

2. The Advisory Committee on [Science] [Climate Change] [Climate Protection and Development] [shall have an advisory [and consultative] role and] shall perform the following functions, making use, to the greatest extent possible, of competent [international and] intergovernmental [and non-governmental] bodies:

(a) [Provide] [Ensure the provision of] regular assessments to the Conference of the Parties on the state of knowledge in the fields of natural, technological, social and economic [and development] sciences pertaining to [climate change and] [observations, predictions and [development]] responses to climate change [and development];

(b) [Provide] [Ensure the provision of] regular assessments to the Conference of the Parties on the adequacy of, and priorities for, [international cooperation on] research [and development] and systematic observation undertaken in support of the Convention [and Annex I] and to make recommendations thereon;

[(c) Review, from a scientific viewpoint, the cumulative effect of measures taken in implementation of the Convention;]

(d) Respond to [scientific] questions and any other matters [within its mandate as specified in this Article] referred to it by the Conference of the Parties or any body subsidiary to the Conference of the Parties;

(e) [Provide] [Ensure the provision of] scientific [and technical] advice to the Parties, upon request, in fulfilling their [reporting requirements] [obligations];

(f) Seek [as appropriate] the assistance, advice and services of competent international [, intergovernmental and non-governmental] bodies and scientific committees;

[(g) [Consult and report on] [Consider] [Review] research, assessments and other information relevant to the purposes of the Convention whether conducted by Parties, non-Parties or other national, international, governmental or non-governmental bodies or agencies [and make [such] recommendations [to such institutions] as it may deem necessary];]

[(h) [Have] access [to] the relevant [scientific and technical] information provided by the Parties in accordance with [Article VII. 1.] (Reporting) and to [the work of the mechanism established under Article [VI. 6.] (Administrative Mechanism)] and [,upon request of the Conference of the Parties,] to furnish opinions and recommendations thereon to the Conference of the Parties [and to the other subsidiary organs involved in the review process];]

(i) Identify on its own initiative matters within its [scientific] mandate [as specified in this Article] that need to be addressed [including the scientific aspects of the future development of the Convention] and to report and make recommendations thereon to the Conference of the Parties;

[(j) Establish such [subsidiary] [ad hoc] bodies, subject to the approval of the Conference of the Parties, as it may deem necessary to assist in the performance of its functions;]

[(k) Provide regular advice to the Conference of the Parties on the most reliable scientific predictions of global and regional climate;]

[(l) Facilitate the provision of regular assessments to the Conference of the Parties of the state of the global climate system and especially of any evidence of global or regional trends;] and

(m) Perform any other function assigned to it by the Conference of the Parties or under any [protocol to the Convention] [related legal instruments as may be agreed upon].

Possible additional text:

[For the purposes of the Convention, the Advisory Committee shall take up responsibility for all functions so far carried out by the Intergovernmental Panel on Climate Change, which, upon the entry into force of this Convention, will be invited, by the Parties, to integrate the structure of the Convention, under the Advisory Committee. The Advisory Committee shall, besides incorporating the functions until now undertaken by the Intergovernmental Panel on Climate Change, provide regular assessments on questions related to developmental concerns and implications of the new regime for cooperation on climate change, as set forth in this Convention.]

Membership

[3. The Advisory Committee shall, [be open-ended] [have [fifteen] members], who are [experts] [government representatives] [government experts] in natural, technological, social and economic [and development] sciences. They shall be elected by the Conference of the Parties, with due regard to the principle of equitable [geographic] [development level] [scientific capability] representation, [and shall serve in their individual capacities]. [Each member shall be elected for an initial term of four years and may serve [one] additional term[s] subject to the procedure set forth above].]

[Alternative for paragraph 3

The Advisory Committee shall be open to representatives of all States Parties who are experts in natural, social and economic sciences.]

[Alternative for paragraphs 3 to 8]

The Conference of the Parties shall, at its first meeting, decide on the composition, terms of membership and election of officers of the Advisory Committee.

[4. Each year the Conference of the Parties shall review the membership of the Advisory Committee in the light of the required expertise and efficiency in the performance of its tasks. If deemed necessary, the Conference of the Parties may decide to reduce or extend the number of members, due account being taken of the criteria, procedures and lengths of terms of office set forth above.]

Meetings

[5. Unless the Conference of the Parties decides otherwise, the Advisory Committee shall be convened within six months after the first meeting of the Conference of the Parties. Thereafter, unless [it or] the Conference of the Parties decide otherwise, the Committee shall meet at least annually.]

Election of Officers

[6. The Advisory Committee shall elect from among its members a chairman, two vice-chairmen and a rapporteur each to serve [in rotation] [for a term of [one] [two] year[s]], and who may be re-elected to serve additional terms.]

Rules of procedure

[7. The Advisory Committee shall agree upon and adopt its rules of procedure, and any amendments thereto, by consensus.]

Observers

[8. The meetings of the Advisory Committee shall be open to observers designated by any Party.]

[9. The Advisory Committee may invite, as necessary, appropriate [non-governmental] [international and intergovernmental] experts to participate in or observe its meetings.]

[10. The Conference of the Parties, in drawing up the rules of procedure for the Advisory Committee, shall make appropriate provisions for the participation as observers of representatives of any body or agency, whether national or international, governmental or non-governmental, competent in matters covered by the Committee.]]

[VI.5 [ADVISORY] COMMITTEE ON IMPLEMENTATION

Establishment

1. An [Advisory] Committee on Implementation is hereby established. [Its members shall be experts in matters related to climate change and shall serve in their individual capacities.]

[The Conference of the Parties, at its first meeting, shall consider and decide upon the structure and operational matters of this Committee, including provisions on its membership, meetings and election of officers.]

Functions

2. [Without prejudice to the national sovereignty of the Parties, and upon their request] The Committee shall review [the implementation by the Parties of their obligations] [the progress by the Parties in implementing all their obligations [and actions] under the Convention. It shall provide information and advice to the Parties on the development [and implementation of national strategies] to meet these obligations and on the fulfilment of the reporting requirements under the Convention. [The socio-economic circumstances of the Parties shall be taken into consideration when the Committee prepares its reports.] To this end,] the Committee shall:

(a) Advise individual Parties, at their request, on the ways and means of meeting the reporting requirements set forth in Article [VII. 1. (Reporting)] [and Annex III], [including the development of national climate change strategies,] [devising and implementing new or additional response measures] [and identifying national programmes that require [financial and technological resources] [transfer of new and additional financial resources and state of the art technology on preferential and non-commercial terms]];

(b) Review and consult with individual Parties on the reports submitted by those Parties in accordance with Article [VII. 1.] (Reporting) [and request, as necessary, additional information or clarification thereon];

[(c) Report and make recommendations, as appropriate, to the Conference of the Parties on the [implementation by individual parties of their obligations under the Convention and on] [review of individual reports and the] [overall] implementation of the obligations and to the extent to which the cumulative effect of the actions to implement the Convention's obligations meets the objective of the Convention;]

[Possible additional paragraphs

On the basis of Article [VII. 1.] (Reporting) and the review, consultation, information or clarification under paragraphs (b) and (e), report and make recommendations as appropriate to the Conference of the Parties on the action of a Party or Parties to implement the Convention's obligations;]

[Review the reports submitted by the Parties in accordance with Article [VII. 1.] (Reporting) to determine, from a technical point of view:

(i) Whether a report is complete, in accordance with Article [VII. 1.] (Reporting);

(ii) Whether the estimated net greenhouse gas reductions of the specific actions identified by a Party in its report could in fact be realized;

(iii) Whether the methodologies used to make the estimates were technically valid; and

(iv) If proposed projects have been identified, whether they would be likely to achieve the net greenhouse gas reductions anticipated and whether the estimated costs are consistent with the scope of the proposed projects;]

(d) Confirm to the Conference of the Parties those Parties which have submitted reports in accordance with the provisions of Article [VII. 1.] (Reporting) [and that their strategies meet their general and specific commitments under the Convention];

(e) [[Seek], [receive and]] consider [relevant] information from competent international and intergovernmental bodies and [[accredited] non-governmental organizations] [other sources];

[(f) Consult with, and seek the advice of, the Advisory Committee on [Science] [Climate Change] [Climate Protection and Development], as necessary;] and

[(g) Assist the Conference of the Parties and individual members in the development and coordination of implementation plans.]

Membership

[3. The Committee shall [have [fifteen] members, who are] [be open-ended and composed of] [government representatives] [experts on matters related to climate change] [government experts on matters relating to climate change] [and shall serve in their individual capacities]. Members shall be elected by the Conference of the Parties with due regard to the principle of equitable representation. Each member shall be elected for a term of four years and may be re-elected to serve additional terms subject to the procedure set forth in this paragraph.]

Meetings

[4. The first meeting of the Committee shall be convened not more than six months after the first meeting of the Conference of the Parties. Unless the Conference of the Parties decides otherwise, subsequent meetings shall be convened at least twice a year.]

Election of Officers

[5. The Committee shall elect from among its members, a chairman and two vice-chairmen and a rapporteur, each to serve for a term of two years, and who may, subject to re-election, serve additional terms.]

Rules of procedure

[6. The Committee shall agree upon and adopt its rules of procedure and any amendments thereto, by consensus.]]

[Possible Alternative to VI.5.

COMMITTEE ON IMPLEMENTATION

Establishment

1. A Committee on Implementation is hereby established.

Functions

[2. Same text as paragraph 2 of Article [VI. 5.] (Implementation).]

2 bis

The Committee shall also report to the Conference of the Parties on questions regarding the interpretation and implementation of the Convention. To this end, the Committee shall:

(a) Receive and consider written submissions by Parties concerning the interpretation and implementation of the Convention;

(b) If the question relates to a specific Party, notify in writing the Party concerned that a question regarding its interpretation and implementation of the terms of the Convention has arisen;

(c) If the question relates to a specific Party, request the Party concerned to respond and take part in consultations with the Committee;

(d) Consult, as it deems necessary, representatives of any Party and any other subsidiary body established by or under the Convention;

(e) Request that the Party concerned advise the Committee of its capacity to implement fully the provisions that were the subject of the question, the provisions of the Convention as a whole, and of its needs relevant to the implementation of the Convention;

(f) Promote, using the means, institutions, and funds available under the Convention, the capacity of the Party concerned to comply with and implement its commitments under the Convention concerning the issue under consideration; and

(g) Report the results of the consultations to the Conference of the Parties including, where appropriate, recommendations for the resolution of the question.

3. The Committee shall have fifteen members, who are experts on matters related to climate change. Members shall be elected by the Conference of the Parties with due regard to the principle of equitable representation. Each member shall be elected for a term of four years and may be re-elected to serve one additional term subject to the procedure set forth in this paragraph.

Meetings

4. The first meeting of the Committee shall be convened not more than six months after the first meeting of the Conference of the Parties. Thereafter the Committee shall meet as necessary to perform its functions, but at least biennially.

Election of Officers

[5. Same text as paragraph 5 of Article [VI. 5.] (Implementation)]

Rules of procedure

[6. Same text as paragraph 6 of Article [VI. 5.] (Implementation)]]

VI.6. [[ADMINISTRATIVE] [INDEPENDENT FUNDING] MECHANISM FOR FINANCIAL RESOURCES AND TECHNOLOGY TRANSFER] [INTERNATIONAL CLIMATE FUND]

OPTION 1

Establishment

[1. An [administrative] [independent funding] mechanism for [the administration] of the financial resources and the transfer of [safe and sound] technology, with a democratic and transparent system of governance, [and equitable participation by developed and developing countries] is hereby [established] [designated under the auspices of . . .].]

[Possible Alternative Text

A financial mechanism is hereby established. The financial mechanism shall operate under the authority of the Conference of the Parties who shall decide on its overall policies. The Executive Committee of the Parties shall, with the consent of the Conference of the Parties, develop and monitor the implementation of the specific operational policies for the purpose of achieving the objectives of the financial mechanism.]

[Possible Additional Text

The financial mechanism shall include a Climate Fund which shall be administered as a Trust Fund by the Global Environment Facility of World Bank/UNDP/UNEP. The Climate Fund shall meet on a grant or concessional basis the agreed incremental costs of developing countries referred to in Article . . .]

Functions

[2. The [administrative] mechanism for financial resources and [safe] technology transfer shall:

[(a) Pursuant to the operational guidelines and policy direction of the Conference of the Parties, be responsible for the administration of funds, including those funds related to the promotion of [preferential and non-commercial] transfer of [safe] technology, provided by the Parties for the fulfilment of the obligations of the Convention;]

(b) Be accountable to the Conference of the Parties for its allocation of the funds and for ensuring that the funding priorities and criteria established by the Conference of the Parties are adhered to in its financial activities;

(c) Receive and collect assessed [funds] [contributions] from the Parties to the Convention;

(d) Be responsible for receiving voluntary contributions, either financial or in kind (technology) provided by Parties, in accordance with criteria set out by the Conference of the Parties;

[Possible Alternative to (c) and (d)

Receive and collect assessed and voluntary contributions, both financial and material, including technology, from Parties and other donors, in accordance with criteria set out by the Conference of the Parties;]

(e) Establish appropriate accounting procedures to ensure that all [assessments and] [assessed and voluntary] contributions made to fulfil the obligations of the Convention are properly recorded and credited;

(f) Be responsible for facilitating the identification and selection of projects for assisting Parties to [meet] [implement] their obligations [jointly] under this Convention, based on criteria and priorities established by the Conference of the Parties;

[(g) Coordinate funding for such projects, including proposals involving transfer of [safe] technology [on preferential and non-commercial terms to developing countries] and endogenous capacity building, and, where possible, seek to match projects with available funds and [safe] technology to ensure [as defined by this Convention] maximum efficiency and cost effectiveness [at the national level];]

(h) Finance its operations from a fund, separate from its programme resources, established specifically to cover its administrative expenses;

(i) Establish internal procedures to evaluate and assess the effectiveness of its programmes drawing on outside expertise as required and reporting on such evaluations and assessments in a timely fashion to the Conference of the Parties;

(j) Provide annual reports to the Conference of the Parties on its operations and, as required, information to the subsidiary bodies of the Convention of the Parties, in order that they can fulfil their mandates; and

[(k) Administer the [joint implementation] [cooperative system of exchange] of [emissions commitments] [commitments on emissions [of greenhouse gases] and enhancement of all sinks] according to the terms of the Convention;]]

[Possible Additional Sub-Paragraphs

(...) Administer operations required of it by protocols to this Convention, and any other matters agreed on by the Conference of the Parties;]

(...) [Explore ways and means to employ financial resources to promote the flexibility of intellectual property rights with a view to promoting the transfer of sound technology to developing countries.]

OPTION 2 (Alternative A)

[1. The Parties hereby designate the Global Environment Facility (GEF) as the mechanism for the provision of financial resources, including financial resources for technology cooperation, related to the implementation of this Convention.

2. The Parties, acting through the Conference of the Parties, may suggest to the GEF general guidelines and specific proposals for funding.

3. Further, interested Parties may meet, on an ad hoc basis, to consider whether any Party is interested in assisting another Party in the implementation of a proposed project it has identified in its national report. Parties may, as appropriate, invite representatives of multilateral financial institutions to such meetings for the purposes of providing them with an opportunity to consider projects for inclusion in their development assistance portfolios.]

OPTION 2 (Alternative B)

[1. The Parties hereby designate the Global Environment Facility (GEF) as the mechanism for the provision of financial resources to assist developing countries to meet the agreed incremental costs of implementing their obligations under the Convention.

2. The Conference of the Parties shall establish appropriate arrangements with the GEF under which the latter will fulfil this role. These arrangements shall include:

(a) Modalities by which the GEF shall take account of the general guidelines and priorities for funding established by the Conference of the Parties;

(b) The receipt, management and disbursement by the GEF of contributions provided under Article [. . .];

(c) The receipt by the GEF of requests from developing country parties for funding for projects, including proposals involving transfer of technology and indigenous capacity building; and

(d) The provision by the GEF of regular reports to the Conference of the Parties on its operations (including how they relate to other assistance provided to developing countries in the energy, forest and other sectors relevant to climate change) and, as required, information to the subsidiary bodies of the Conference of the Parties to assist them to fulfil their mandate.

3. The Conference of the Parties shall ensure that the GEF is kept fully and regularly informed of the policy framework and priorities it adopts, and particularly those that are relevant to the activities of the GEF in the field of climate change.]

OPTION 3

Establishment

[1. An International Climate Fund is hereby established under the authority of the Conference of the Parties which shall decide on its overall policies and operations, in particular determining priorities, criteria and selection of projects and activities to be funded. It shall be distinct and independent from other funds and international financial institutions.

2. The mechanism for financial resources and transfer of technology set up under the International Climate Fund, shall be administered as follows:

Functions relating to financial resources

(a) Meet on a grant basis the full incremental costs of measures taken by developing country Parties to address climate change, in accordance with criteria to be developed by the Conference of the Parties;

(b) Cover the costs to developing country Parties of adaptation and mitigation measures that may be needed as a result of the adverse consequences of climate change and the direct and indirect social and economic costs to developing countries that may result from the implementation of the Convention;

(c) Be responsible for receiving assessed and other contributions, either financial or as otherwise provided by Parties and other bodies, in accordance with criteria set out by the Conference of the Parties;

(d) Establish appropriate accounting procedures to ensure that all assessments and contributions made to fulfil the obligations of the Convention are properly recorded, credited and accounted for;

(e) Be responsible for facilitating the identification and selection of projects and activities for supporting the efforts of the Parties to meet their obligations under this Convention;

(f) Finance the secretariat services of the Fund and related support costs;

(g) Provide an annual report to the Conference of the Parties on its operations and, as required, information to the subsidiary bodies of the Conference of the Parties, in order that they can fulfil their mandates; and

(h) Provide, in general, funding for projects and activities organized under this Article and in accordance with the provisions set out by this Convention.

Functions related to transfer of technology

(i) Pursuant to the operational guidelines and policy direction of the Conference of the Parties, coordinate the appropriate procedures and take the necessary steps to promote, facilitate and enable the transfer of technology;

(j) Provide funding to purchase requisite technologies for the implementation of projects undertaken by developing country Parties under the mechanism set up by the International Climate Fund;

(k) Promote, and finance when necessary, the exchange of and access to technological information required by the Parties. The technological information should include inter alia, the environmentally sound and safe technologies including those that have been neglected or displaced, the technological options, trading conditions, implementation costs and technological security;

(l) Coordinate ways and means to develop long-term technological partnerships between the holders of environmentally sound technologies and potential users in Parties, particularly developing countries, taking into account their national objectives and policies;

(m) Organize, when requested by a recipient Party, or group of recipient Parties and on terms and conditions set out by such recipient countries, international competitive bidding to purchase requisite technologies for transfer to the requesting parties;

n) Provide requested support to a recipient Party or group of recipient Parties to assess the offers presented in international competitive bidding, to enable the requesting parties to obtain the most favourable terms and conditions, including inter alia, in terms of price, transfer of know-how, high safety and environmental requirements, training, supply of spare parts, and maintenance; and

(o) Ensure the development of endogenous capacity building in developing country Parties, including technologies in the public domain, in accordance with their development plans, objectives and priorities of these countries, through, inter alia, the supply of necessary equipment, expertise and facilities for research and development, and the training of scientific, technical, and managerial personnel.]

[Possible Additional Text Related to Objectives under Article 22 (Based on Misc. 12)[7]

1. The funding mechanism shall have the following functions:

(a) Implement commitments under the Convention;

(b) Adapt to and mitigate the adverse effects of climate change in accordance with their national development plans, priorities and objectives.

(c) Provide access to appropriate environmentally [safe and] sound "state-of-the-art" technologies;

(d) Strengthen operative institutional capacities for dealing with climate change, including human resources development;

(e) Promote research on emission control of the GHGs from existing activities especially in the energy, transport, agriculture and industrial sectors;

(f) Conduct research and pilot projects on the ecologically sustainable enhancement of natural GHG sinks.]

[7] The current text corresponding to that draft Article is Section IV.2.2., Alternative B.

[VI.7. INSURANCE

The Parties shall establish separate supplementary financial mechanisms to assist developing countries, particularly least developed countries, vulnerable small island and low lying coastal developing countries [and developing countries with vulnerable mountain areas] [and countries suffering from desertification or drought] to prevent or mitigate the adverse consequences of sea-level rise resulting from climate change, as specified in [Annex V] (Insurance Mechanism).]

VII. PROCEDURES

VII.1. REPORTING

Submission of Reports

1. [In accordance with its particular circumstances and capabilities] Each Party [shall] [may] submit to the secretariat a report on [its national strategy and on the policies and] the measures it [has undertaken] [is undertaking] to implement its obligations [as well as the opportunity costs of foregoing a national development option and [on] projects for transfer of financial resources and technologies] under the Convention, as well as on any other actions it deems relevant [with respect to the objectives to the Convention], [including the extent to which those measures will contribute to meeting such obligations], [[drawn up] [in accordance with] [and may include] the provisions set forth in [Annex III] to this Convention] [consistent with national laws and regulations]. [For developing country Parties, the fulfilment of this obligation will be conditional on the availability of corresponding new and additional financial resources.]

First Report

2. For developed country Parties, the first report [shall] [may] be submitted within [one] [two] year[s] of the entry into force of the Convention [for it] or within [one] [two] year[s] of ratification, acceptance or approval of, or accession to, the Convention. For developing country Parties, the first report [shall] [may] be submitted within [two] [four] [five] years of the entry into force of the Convention [for it] or within [two] [four] [five] years of ratification, acceptance or approval of, or accession to, the Convention.

[3. The developing country Parties to this Convention shall be assisted in the preparation of the report. Such assistance will include both technical and financial assistance as well as the identification of the technical and financial needs associated with the implementation and review of such reports.]

Frequency of Subsequent Reports
(See also Annex III)

[4. The frequency according to which reports and their updating will be submitted will vary from one year to five years, depending on the different levels of energy-related CO_2 emissions per capita, as defined by the Conference of the Parties, based on internationally accepted data.]

Regional/Group reporting

[5. Any group of Parties may, subject to the prior notification to the [Advisory Committee on Implementation] [body in charge of implementation], [and with the approval of the Conference of the Parties], submit a single report in fulfilment of their obligation under paragraph 1 above [provided that such a report includes details of each Party's contribution to fulfilment of its individual obligations].]

Transmission to the Conference of the Parties

6. The secretariat [shall] [may] transmit the reports submitted by the Parties to the Conference of the Parties, [within four months of receiving such reports] except as provided for in paragraph 8 below.

Transmission to the Advisory Committee on Implementation

[7. The secretariat [shall] [may] transmit the reports submitted by the [Parties to the [Advisory Committee on Implementation] [body in charge of implementation]].]

Confidential Information

8. The secretariat shall ensure that information [designated as confidential by the supplying Party] [and] [meeting the criteria for confidentiality established in Annex III] is not disclosed [[to other Parties and is aggregated] [and shall aggregate it] to protect its confidentiality [before it is made available to all Parties].]

[VII. 2. (Alternative A)

RESOLUTION OF QUESTIONS REGARDING INTERPRETATION AND IMPLEMENTATION OF THE CONVENTION

Process

[1. [Subject to paragraph 5] The Conference of the Parties shall, in a timely fashion, consider and resolve questions regarding the interpretation and implementation of the Convention [including those questions] that are brought to its attention in writing by Parties or by its subsidiary bodies. To this end, it may establish [one or more ad hoc] [a] Panel(s) of its members, designated [with specific and limited terms of office] in accordance with Annex ... (Annex to be drafted). [If questions relate to a specific Party, the ad hoc panel(s) shall invite a representative of the Party that is the subject of the question (hereinafter referred to as the "Party concerned") to attend the meetings of the Panel.] [In considering the question before the next ordinary meeting of the Conference of the Parties and following the meeting at which the ad hoc Panel was established, the ad hoc Panel shall:

(a) If the question relates to a specific Party, [(hereinafter referred to as the "Party concerned")] notify in writing the Party concerned that a question regarding [its] interpretation and implementation of the terms of the Convention has arisen;

(b) [If the question relates to a specific Party,] request the Party concerned to respond [and] take part in consultations with the Panel [and attend meetings of the Panel];

[(c) Request any Party which brought the question to the attention of the Conference of the Parties to take part in consultations with the Panel and attend meetings of the Panel;]

(d) Consult, as it deems necessary, representatives of any Party and other expert bodies;

(e) Request that the Party concerned advise the ad hoc Panel(s) of its capacity to implement fully the provisions that were the subject of the question, the provisions of the Convention as a whole, and of its needs relevant to the implementation of the Convention;

(f) Promote, using the means, institutions, and funds available under the Convention, the capacity of the Party concerned to comply with and implement its commitments under the Convention; and

(g) Report the results of the consultations to the Conference of the Parties, including, if necessary, a recommendation for resolution of the question.]

[Possible addition to paragraph 1

The Conference of the Parties may, pending final resolution of the question, take any interim action it deems necessary to advance the objectives of the Convention.]

[Alternative to paragraph 1

1. The Conference of the Parties shall, in a timely fashion, consider and resolve questions regarding the interpretation and implementation of the Convention that are brought to its attention in writing by Parties or by its subsidiary bodies. To this end the Committee on Implementation established under Article [VI. 5.] (Implementation Committee) shall consider such questions and submit a report to the Conference of the Parties.]

Consideration of Report

[2. At its next [ordinary] meeting, the Conference of the Parties shall consider the report of [an ad hoc Panel] [Committee on Implementation] and [take any course of action] [adopt any recommendation] [issue recommendations on actions] [it deems] necessary to further the objectives of the Convention. In doing so, the Conference of the Parties [or an ad hoc Panel] may, at any time, seek an advisory opinion from [an ad hoc Panel of Legal Experts.] [a subsidiary body established by or under the Convention.] [The Conference of the Parties may also, if appropriate, request an advisory opinion from the International Court of Justice.]]

Decisions by the Conference of the Parties

[3. If the Party concerned does not comply with the course of action set out by the Conference of the Parties, the Conference of the Parties may, again, take any further action it deems necessary to advance the objectives of the Convention [including:...].]

Voting

4. The Parties shall make every effort to take [action] [decisions] under this Article by consensus. If [all] efforts at consensus have [been exhausted] [failed], [action] [recommendations] shall [, as a last resort,] be [taken] [adopted] by a [two-thirds] [three-quarters] majority vote of the Parties present and voting.

[Possible additional paragraph

5. The Conference of the Parties may resolve not to use the procedure set out in this Article, if the particular question of interpretation or implementation is being considered by the Arbitral Tribunal pursuant to Article [VII. 2.] (Alternative 2) (Settlement of Disputes) or the International Court of Justice.]]

[POSSIBLE ALTERNATIVE TO VII. 2. (Alternative A)

Process

1. Questions relating to the implementation of the Convention may be drawn to the attention of the Conference of Parties by Parties [and by any subsidiary body established by or under the Convention]. Any Party concerned about another Party's implementation of its obligations under the Convention or about its own capacity to implement fully those obligations may notify its concern, through the secretariat, to the Conference of Parties. The Conference of Parties shall, in timely fashion, consider any such question and promote its resolution. To that end it may, as necessary, establish an ad hoc Panel of ..... of its members.

2. In considering the question before the next ordinary meeting of the Conference of the Parties, the ad hoc Panel shall:

(a) Invite the Party which has brought the question to the attention of the Conference of the Parties and any other Party whose implementation of the Convention is in question to attend meetings of the Panel and take part in consultations with it;

(b) Provide the Party whose implementation of the Convention is in question a full opportunity to inform the Panel of its capacity to implement its obligations under the Convention and of its needs relevant to that issue;

(c) Consult, as it deems necessary, any subsidiary body established by or under the Convention and other expert bodies;

(d) Promote, as necessary, the enhancement of the capacity of the Party whose implementation of the Convention is in question to implement fully its obligations under the Convention; and

(e) Report the results of its consultations, together with any recommendations, to the next ordinary meeting of the Conference of the Parties.

Consideration of Report

3. After considering the report of the ad hoc Panel, the Conference of the Parties may decide to adopt a recommendation or recommendations to promote the full implementation of the Convention and to further its objectives.

Voting

4. The Conference of the Parties shall make every effort to take decisions under this Article by consensus. If all efforts at consensus have been exhausted decisions shall, as a last resort, be taken by a two-thirds majority vote of the Parties present and voting.

Additional rules

5. The Conference of the Parties may in elaboration of the provisions of paragraph 2 of this Article, lay down additional rules relating to membership of ad hoc Panels, their meetings and procedures.

Relationship to Dispute Settlement (VII. 2.) (Alternative B)

Option 1

6. If, after the expiry of . . . months following the initial submission of any question to the secretariat pursuant to paragraph 1 of this Article, any Party continues to have a concern relating to the implementation by another Party of its obligations under the Convention, it shall be entitled to invoke the dispute settlement procedures, established by Article [VII. 2.] (Alternative B) (Settlement of Disputes) of the Convention.

Option 2

6. The provisions of this Article are without prejudice to the operation of Article [VII. 2.] (Alternative B) (Settlement of Disputes) of the Convention.]

[VII. 2. (Alternative B)

SETTLEMENT OF DISPUTES

Negotiation and other peaceful means

[1. In the event of a dispute between Parties concerning the interpretation or application of this Convention or any Protocol thereto, the Parties concerned shall seek solution by negotiation [or in the manner set forth in Annex . . . (Resolution of Questions Regarding Interpretation and Implementation of the Convention).]

2. If the Parties concerned cannot reach agreement by negotiation, they may jointly seek the good offices of, or request mediation by, a third party.]

Recourse to other third-party procedures

[3. If the Parties concerned cannot settle their dispute in the manner set forth in paragraphs 1 and 2 of this Article, and if they so agree, the dispute shall be submitted to the International Court of Justice or to arbitration in accordance with [Annex IV].

4. Failure to reach common agreement on submission of the dispute to the International Court of Justice or to arbitration does not absolve the Parties from the responsibility of pursuing the means of settlement pursuant to paragraphs 1 and 2 of this Article.

5. At the time of ratification, acceptance, approval, or accession to the Convention, or at any time thereafter, a State or regional economic integration organization may declare in a written instrument submitted to the Depositary that, for a dispute not resolved in accordance with paragraphs 1 and 2 above, it accepts in relation to any Party accepting the same obligation, one or both of the following means of dispute settlement:

(a) Arbitration in accordance with [Annex IV];

(b) Submission of the dispute to the International Court of Justice.

6. A declaration made under paragraph 5 above shall remain in force until it expires in accordance with its terms or until three months after written notice of its revocation has been deposited with the Depositary.

7. A declaration made under paragraph 5 above shall not affect the operation of paragraphs 1 and 2 of this Article.

8. A new declaration, a notice of revocation or the expiry of a declaration shall not in any way affect proceedings pending before the International Court of Justice or the Arbitral Tribunal, unless the Parties to the dispute otherwise agree.

9. Declarations and notices referred to in this Article shall be deposited with the Depositary who shall transmit copies thereof to the secretariat and to all Parties.

10. If, after the expiry of twelve months from the date of a request made pursuant to paragraph 1 of this Article, the Parties concerned have not been able to settle their dispute or have not agreed on the competence of the International Court of Justice or the Arbitral Tribunal, the dispute

OPTION 1: Conciliation Commission

shall be submitted to a Conciliation Commission. The Commission shall be composed of an equal number of members appointed by each Party concerned, and of a chairman chosen jointly by the members appointed by the Parties. The Commission shall render a final, non-binding decision, which the Parties shall consider in good faith.

OPTION 2: Judicial settlement

may be submitted, at the request of any one of the Parties, to the Arbitral Tribunal.]]

VII. 3. AMENDMENTS TO THE CONVENTION

Proposals

1. Any Party may propose amendments to this Convention.

Adoption of Amendments

2. Amendments to this Convention shall be adopted at a [regular] meeting of the Conference of the Parties. The text of any proposed amendment to this Convention shall be communicated to the Parties by the secretariat at least [three] [six] months before the meeting at which it is proposed for adoption. The secretariat shall also communicate proposed amendments to the Signatories to the Convention for information.

3. The Parties to the Convention shall make every effort to reach agreement on any proposed amendment to the Convention by consensus. [If all efforts at consensus have been exhausted, and no agreement reached,] [If the efforts do not seem likely to attain this objective,] the amendment shall be adopted by a [two-thirds] [three-quarters] majority vote of such Parties present and voting at the meeting [whose [net] emissions of [greenhouse gases] [CO_2 represent at least [xx%] [75%] [80%] of estimated global [net] [CO_2] [greenhouse gases] [emissions in the preceding [five] year[s],] the amendment shall be submitted by the Depositary to all Parties for their ratification, acceptance or approval.

Voting

4. For the purposes of this Article, "Parties present and voting" means Parties present and casting an affirmative or negative vote.

Entry into Force of Amendments

5. Instruments of ratification, acceptance or approval of amendments shall be deposited with the Depositary. Amendments adopted in accordance with paragraph 3 above, [for those States having accepted the amendment] shall [unless otherwise provided in the amending instrument itself] enter into force on the ninetieth day after the date of receipt by the Depositary of notification of their ratification, acceptance or approval, by at least [two-thirds] [three-quarters] of the Parties to this Convention [and whose [net] emissions of greenhouse gases represent at least 80% of [net] global emissions in the preceding year].

6. The amendments shall enter into force for any other Party on the ninetieth day after

the date on which that Party deposits with the Depositary its instrument of ratification, acceptance or approval of the amendments.

[VII. 4. PROTOCOLS

Adoption

1. [This Convention and its protocols shall jointly constitute an international legal regime regarding climate change.] The Conference of the Parties may at any [regular] meeting adopt protocols [that are aimed at implementing the [comprehensive] purposes and principles established in the Convention, specifying [comprehensive] measures or obligations relating to [certain] [all] aspects of climate change]. [The protocols shall be in conformity with the provisions of the Convention.]

Notification to the Parties

2. The text of any proposed protocol shall be communicated to the Parties by the secretariat at least [three] [four] [six] months before such a meeting.

Entry into Force

[3. The requirements for the entry into force of any protocol shall be established by that instrument [and may include provisions regarding [accelerated] [differentiated] procedures for entry into force].]

Parties to a Protocol

[4. Only Parties to the Convention may be Parties to a protocol.]

Only Parties to Protocol to take Decisions relating to a Protocol

5. [Subject to the provisions of paragraph 4 above,] Decisions under any protocol shall be taken only by the Parties to the protocol concerned.]

VII. 5. ADOPTION AND AMENDMENT OF ANNEXES TO THE CONVENTION

Annexes as Integral to the Convention

1. The Annexes to this Convention shall form an integral part of this Convention and, unless expressly provided otherwise, a reference to this Convention constitutes at the same time a reference to any Annexes thereto. [Such Annexes shall be restricted to [procedural, scientific, technical and administrative matters] [technical lists or forms of a scientific or technical character] [lists, forms and any other material of a descriptive nature only].]

Adoption of Additional Annexes to the Convention

2. [Additional] Annexes to the Convention shall be proposed and adopted according to the procedure set forth in Article [VII. 3.] (Amendments to the Convention).

Procedure for Entry into Force of Additional Annexes to the Convention

3. Annexes that have been adopted in accordance with paragraph 2 above shall enter into force for all Parties to the Convention [three] [four] [six] months after the date on which the Depositary issues notices to such Parties of the adoption of the Annex, except for those Parties that have notified the Depositary, in writing, within that period of their non-acceptance of the Annex. The Annex shall enter into force for Parties which withdraw their notification of non-acceptance on the ninetieth day after the date of withdrawal of such notification has been received by the Depositary.

Procedure for Amendments to Annexes

4. The proposal, adoption and entry into force of amendments to Annexes to the Convention shall be subject to the same procedure as that for the proposal, adoption and entry into force of Annexes to the Convention.

5. If an additional Annex or an amendment to an Annex involves an amendment to the Convention, the additional Annex or amended Annex shall not enter into force until such time as the amendment to this Convention enters into force.

VII. 6. RIGHT TO VOTE

1. Each Party to the Convention shall have one vote, except as provided for in paragraph 2 below.

2. Regional economic integration organizations, in matters within their competence, shall exercise their right to vote with a number of votes equal to the number of their member States that are Parties to the Convention [and which are present at the time the vote is taken]. Such an organization shall not exercise its right to vote if any of its member States exercises its right, and vice versa.

VIII. FINAL CLAUSES

VIII.1. DEPOSITARY

The Secretary-General of the United Nations shall be the Depositary of this Convention.

VIII.2. SIGNATURE

This Convention shall be open for signature by States [Members of the United Nations or members of the Specialized Agencies of the United Nations] and by regional economic integration organizations at [ ] from [ ] to [ ], and at the United Nations Headquarters in New York from [ ] to [ ].

VIII.3. RATIFICATION, ACCEPTANCE, APPROVAL OR ACCESSION

1. The Convention shall be subject to ratification, acceptance, approval or accession by States and by regional economic integration organizations. It shall be open for accession from the day after the date on which the Convention is closed for signature. Instruments of ratification, acceptance, approval or accession shall be deposited with the Depositary.

Regional Economic Integration Organizations

2. Any regional economic integration organization which becomes a Party to this Convention without any of its member States being a Party shall be bound by all the obligations under the Convention. In the case of such organizations, one or more of whose member States is a Party to the Convention, the organization and its member States shall decide on their respective responsibilities for the performance of their obligations under the Convention. In such cases, the organization and the member States shall not be entitled to exercise rights under the Convention concurrently.

Declarations of Competence

3. In their instruments of ratification, acceptance, approval or accession, [the] regional economic integration organizations shall declare the extent of their competence with respect to the matters governed by the Convention. These organizations shall also inform the Depositary, who shall in turn inform the Parties, of any substantial modification in the extent of their competence.

VIII.4. ENTRY INTO FORCE

Entry into Force of the Convention:

1. This Convention shall enter into force on:

(Four options)

- **Option 1:**
  The ninetieth day after the date of deposit of the [twentieth] [twenty-fifth] [fortieth] [fiftieth] [sixtieth] [eightieth] instrument of ratification, acceptance, approval or accession.

- **Option 2:**
  The ninetieth day after the date of deposit of the instrument of ratification, acceptance, approval or accession from States or regional economic integration organizations whose [net] emissions of greenhouse gases [CO_2] represent [two-thirds] [three-quarters] of estimated total global net emissions in [year].

- **Option 3:**
  The ninetieth day after the date of deposit of the [twentieth] [twenty-fifth] [fortieth] [fiftieth] [sixtieth] [eightieth] instrument of ratification, acceptance, approval or accession by, and of ratification, acceptance, approval or accession by States or regional economic integration organizations whose [net] emissions of greenhouse gases [CO_2] represent [two-thirds] [three-quarters] of estimated total global net emissions in [year].

- **Option 4:**
  The ninetieth day after the date of deposit of the [twentieth] [twenty-fifth] [fortieth] [fiftieth] [sixtieth] [eightieth] instrument of ratification, acceptance, approval or accession, or the ninetieth day after the date of deposit of the instrument of ratification, acceptance, approval or accession from States or regional economic integration organizations whose [net] emissions of greenhouse gases [CO_2] represent [two-thirds] [three-quarters] of estimated total global net emissions in [year], whichever is the earlier.

Entry into Force for Parties once Convention Already in Force

2. For each State or regional economic integration organization that ratifies, accepts or approves this Convention or accedes thereto after the deposit of the [twentieth] [twenty-fifth] [fortieth] [fiftieth] [sixtieth] [eightieth] instrument of ratification, acceptance, approval or accession, [in accordance with paragraph 1] it shall enter into force on the ninetieth day after the date of deposit by such State or regional economic integration organization of its instrument of ratification, acceptance, approval or accession.

Regional Economic Integration Organizations

3. For the purposes of paragraphs 1 and 2 above, any instrument deposited by a regional economic integration organization shall not be counted as additional to those deposited by member States of the organization.

VIII.5. RESERVATIONS AND DECLARATIONS

1. [No] reservations may be made to this Convention.

Parties Not Precluded from Making Declarations

[2. Paragraph 1 above shall not, however, preclude a State or regional economic integration organization when signing, ratifying, accepting, approving or acceding to this Convention, from making declarations or statements, provided that such declarations or statements do not purport to exclude or to modify the effects of the provisions of the Convention in their application to that State or regional economic integration organization.]

VIII.6. WITHDRAWAL

Written Notification of Withdrawal from Convention

1. At any time after [three] [four] [five] years from the date on which this Convention has entered into force for a Party, that Party may withdraw from the Convention by giving written notification to the Depositary.

Effective Date of Withdrawal

2. Any such withdrawal shall take effect upon expiry of [six months] [one year] from the date of its receipt by the Depositary, or on such later date as may be specified in the notification of the withdrawal.

Withdrawal from Convention considered as Withdrawal from Protocol

3. Any Party that withdraws from this Convention shall be considered as also having withdrawn from any protocol to which it is a Party. [Withdrawal from a protocol is governed by the provisions of this protocol.]

VIII.7. AUTHENTIC TEXTS

The original of this Convention, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

IN WITNESS WHEREOF the undersigned, being duly authorized to that effect, have signed this Convention.

Done at .....this .....day of .....19...

[ANNEXES]

[ANNEX I

[RESEARCH [TECHNOLOGICAL] [[AND] DEVELOPMENT] AND SYSTEMATIC OBSERVATION] [TECHNOLOGICAL AND SCIENTIFIC RESEARCH AND SYSTEMATIC OBSERVATION]

[1. The Parties recognize that [the] major [scientific] [issues] [uncertainties] [[in the] state of knowledge] related to climate change [,and its relation to development,] are:]

[Possible Alternative Chapeau

The following areas are suggested for the purposes of Article [V.2], in the promotion of and cooperation in research, technological development and systematic observation relevant to climate change:]

(a) Understanding the interactions between changes in the climate system and the physical, chemical, biological, hydrological and geological processes and solar cycles in the atmosphere, oceans and land;

[(b) Documentation of the contemporary and historic changes in the Earth's climate through long-term systematic observations of the Earth's atmosphere, oceans, terrestrial and socio-economic systems;]

[(c) Developing models of the Earth's climate system and prediction of the magnitude and rate of future climate change in the global, regional and national scales, due to both natural processes and human activities;]

(d) Understanding the impacts of climate change [and the response to it] on ecosystems and social and economic systems; and

(e) Evaluating the methodologies for assessing options for mitigating and adapting to climate change, including consideration of [socio-economic] costs and benefits of such options [including opportunity costs of foregoing options].

[[2. [The Parties recognize the need to cooperate] [Indicative list of areas where cooperation] in conducting research [and development] and systematic observation [is needed], in accordance with Article [V.2] [, in such areas as]:]

(a) Systematic Observations. Long term systematic observations of the Earth's atmosphere, oceans, seas, terrestrial and socio-economic systems on global and regional scales, including documenting the contemporary and historical changes in the Earth's environment using an integrated space, land and ocean based [global climate] observing system and relevant paleoenvironmental data. [Full use of existing weather and climate observing systems should be ensured.] Specifically there is a need for systematic observations to measure and/or estimate:

(i) atmospheric parameters, including,

- greenhouse gases, aerosols and their possible precursors;
- clouds, by type, amount, height, composition and optical properties;
- precipitation, evaporation and water vapour, temperature, wind and radiative fields.

(ii) oceanic parameters, including,

- ocean fluxes, particularly of heat and of greenhouse gases, aerosols, and their possible precursors between the ocean surface and atmosphere;
- sea level, temperature, roughness, circulation, ice cover, chemical composition, biological activity and colour.

[(iii) coastal zone parameters, including,

- sea level, temperature and other relevant meteorological and oceanographic parameters;
- parameters defining state and viability of coastal ecosystems, including coral and planktonic populations;
- parameters defining the quality and viability of human settlements.]

(iv) terrestrial parameters, including,

- fluxes of heat and of greenhouse gases, aerosols, and their possible precursors between ecosystems and the atmosphere;
- extent, state and productivity of managed and unmanaged ecosystems;

- physical surface characteristics, such as temperature, albedo, roughness, soil parameters, snow, ice, permafrost, glaciers, lake levels, and river discharge; and

- geodynamic, seismic and volcanic processes and their consequences.

(v) socio-economic parameters, including,

[- consumption patterns;]
- population dynamics;
- urban development;
- rural population;
- type, extent and variability of land use practices;
- economic variables including reserves of natural resources, incremental costs, debt problems, [commodity prices] and terms of trade;
- geographic characteristics of countries;
- technology and practices in energy, forestry, agriculture, transport, hydrology, and industry;
- human health.

(b) Process research. Research of the coupled physical, chemical, biological, [hydrological, geological,] economic and social processes that affect the Earth's climate system. There is a need for an improved understanding of the processes [and development of methodologies] governing:

(i) the sources and sinks of greenhouse gases, aerosols, and their possible precursors, which affect future atmospheric concentrations and the Earth's radiative balance, and how these may be influenced by climate change. Specifically:

- identification, quantification and development of an understanding of the processes that control oceanic, terrestrial, and atmospheric sources, sinks and reservoirs of anthropogenic and natural origin;
- quantitative estimation of radiative properties and lifetimes;
- improved indices that reflect the radiative forcing of greenhouse gases [, taking into account historical emissions];

- development and improvement of methodologies for national inventories of sources, sinks and reservoirs.

(ii) atmospheric cycling of [radiation,] heat and water, with emphasis on cloud formation, dissipation and radiative properties, which influence the response of the atmosphere to greenhouse forcing. Specifically, research on:

- the atmospheric distribution of water vapour, precipitation, and clouds;
- evaluating the radiative properties of clouds;
- evaluating the temporal variability of solar radiative input and atmospheric transmission;
- the evaluation and mapping of surface albedo.

(iii) oceans, which influence the patterns and rate of climate change. Specifically, studies to establish the mechanisms governing:

- ocean dynamics;
- the transport of heat and chemicals;
- exchanges of energy and chemicals with the atmosphere;
- interactions between the ocean and land;
- the role of biological processes in the cycling of carbon and sulfur and their response to anthropogenic activities;
- sea level changes.

(iv) the role of terrestrial systems in hydrological and ecological processes, which affect regional climate change and water availability. Specifically, studies of the role of terrestrial geophysical and biological, hydrological processes in the cycling of energy, water and nutrients on land and exchange with the atmosphere, [the sea level rise and rivers of fresh water] and their response to environmental changes.

(v) the cryosphere, particularly in polar regions, which affects global sea level changes and regional climate change. Specifically, studies of:

- the mass balance of polar ice sheets and glaciers and their response to climate change;
- the role of sea ice in the atmosphere-ocean exchange of energy;
- the processes controlling snow accumulation, redistribution, and seasonal melting;
- the dynamics of permafrost systems.

[(vi) the biosphere and the oceans,including those of the Antarctica and the Arctic regions, as reservoirs or sinks, as well as ways and means of preserving and enhancing sinks and reservoirs and creating new ones.]

(vii) [economic and social] [development] processes, which contribute and react to climate change. Specifically, studies of how the climate system [influences and] is influenced by:

- [natural resource endowment;]
- economic growth, policies and practices;
- technology and practices in a wide range of sectors including energy, agriculture, forestry, transportation and industry; and
- social systems, policies and practices.

(c) Modelling and prediction. Prediction of the magnitude and rate of future climate change, including an identification and assessment of uncertainties, through the development and validation of integrated climate system models with enhanced [local and] regional [and national] resolution, social and economic models, and the links and feedbacks between climate change and social and economic processes [and development paths]. At a global [, and] regional [and national] scale, there is a need for [broadened and improved efforts related to]:

(i) [improved] representation within models of processes affecting climate;

(ii) evaluation of the predictability of climate;

(iii) comparison of model output with current observation, past records and transient climate parameters;

(iv) development of fully coupled climate models, which integrate the effects of changing atmospheric radiative properties with changes in physical, chemical, [and] biological [, hydrological, geological] processes [in solar cycles] and between the atmosphere, oceans and land, linked to social and economic models, and

(v) simulation of climate change based on different emission scenarios.

(d) Impact research. Research to [evaluate and to] develop methodologies for evaluating the local and regional [and national] impacts of climate change, and identifying the environmental, economic and social consequences. There is a need for an improved understanding of the impact of climate change on:

(i) natural terrestrial, aquatic and coastal ecosystems and resources. As a function of rate and magnitude of climate change, determining the sensitivity of:

- ecosystems (e.g., productivity, extent) to changes in temperature, hydrological system (e.g., groundwater, precipitation, soil moisture), atmospheric composition, and sea level;
- changes in stability and composition in ecosystems; and
- the biological diversity of marine life [in the oceans] including shifts in marine organisms.

(ii) agriculture, forestry and fisheries. Conducting regional studies of the impacts of climate change on:

- potential productivity of crops;
- the vulnerability of major crops and their varieties;
- the abundance and distribution of fisheries;
- socio-economics of changed transport, storage processing and marketing conditions.

(iii) water resources. Examining, on a regional basis, effects of changes in the hydrological cycle on:

- provision of drinking, irrigation and industrial water supplies;
- impact on agriculture [and]
[- inland navigation;]
- combined effects of climate change and land use changes on water resources;
- drought and desertification.

(iv) coastal environment

- sea level and temperature[s] [changes], and their subsequent regional impacts on geological and ecological processes, including coral and planktonic populations;
- the viability and quality of human settlements; and
- frequency and magnitude of marine disasters such as severe storms and storm surges and their impact on coastal structures.

(v) social systems and economics. Investigating the effects of changes in climate, weather, [and] sea level [and temperature] on:

- disease vectors, viability of pathogens, nutrition and other factors relevant to human health;
- the viability and quality of land use, human settlements, the built environment and all other aspects contributing to the quality of life;
- the economic, social and cultural consequences for societies, especially for [vulnerable small island countries] [those particularly vulnerable].

(e) Research to develop [response measures, including development of technology for the] [methodologies on the] mitigation of, and adaptation to, climate change, including for:

(i) examining options for reducing sources and/or increasing sinks of greenhouse gases and their potential precursors

- from energy, industrial, commercial, domestic and transport sources through studies of:
  - technology options for low emission, high efficiency and alternative technologies, including biotechnology, biomass, wind and solar energy, and technologies for greenhouse gas fixation;
  - applicability, cost and social factors affecting use of conventional and newly developed technology options;
- from forestry and agriculture through studies of:
  - methods for reducing emissions and/or increasing sinks;
  - applicability, cost and social factors affecting use of lower emission or enhanced sink practices;

- from oceans through studies of methods, costs and consequences of increasing oceanic uptake;
- by utilizing economic and other policy instruments; and
- through education and public information techniques.

(ii) examining options for adapting to a changing climate of:

- natural terrestrial, aquatic and coastal ecosystems and resources;
- agriculture, forestry and fisheries;
- water resources;
- coastal environment; and
- social systems and economics.

(iii) Assessing the costs, benefits, and environmental and social consequences of mitigation and adaptation responses, including:

- as a function of the timing and magnitude of climate change;
- the direct and indirect links between responses and economic activity, [including eradication of poverty and trade]; and
- the distributional and other social implications of responses within and between countries and regions; and
- countries which are not in a position to use substitutes for fossil fuels or do not possess the flexibility to switch to non-fossil fuels.

(iv) Environmentally safe and sound technologies, practices and measures.]

[3. The Parties recognize the need to support existing international or intergovernmental programmes or organizations aiming at defining, conducting, assessing and/or financing research, development and systematic observation as described in paragraphs 1 and 2 of this Annex. In particular, the Parties acknowledge the following programmes and their subsidiary programmes, and organizations:

- Intergovernmental Panel on Climate Change (IPCC)
- World Climate Programme (WCP)
- International Geosphere-Biosphere Programme (IGBP).]]

[POSSIBLE ALTERNATIVE TEXT FOR ANNEX I

1. The Parties recognize that the major scientific issues related to climate change are:

(a) Understanding the interactions between changes in the climate system and the physical, chemical, biological, and geological processes in the atmosphere, oceans and land;

(b) Understanding the impacts of climate change on ecosystems and social and economic systems;

(c) Evaluating the methodologies for mitigating and adapting to climate change, including consideration of costs and benefits of such options.

To resolve these problems, the active participation of all countries is required.

2. The Parties recognize, in accordance with Article [V. 2.] (Research [and Development] and Systematic Observation), the need to cooperate in the establishment of a global climatic observation system in using and developing existing networks of measurement, transmission, processing and data storage. In particular, it is necessary to undertake systematic observations in order to measure directly or indirectly:

(a) Atmospheric parameters, including,

(i) greenhouse gases, aerosols and their possible precursors;

(ii) clouds, by type, amount, height, composition and optical properties;

(iii) precipitation, humidity, evaporation and water vapour, temperature, wind and radiative fields.

(b) Oceanic parameters, including,

(i) ocean fluxes, particularly of heat and of greenhouse gases, aerosols, and their possible precursors between the ocean surface and atmosphere;

(ii) sea level, temperature, roughness, circulation, ice cover, chemical composition, biological activity and colour.

(c) Terrestrial parameters,

(i) fluxes of heat and of greenhouse gases, aerosols, and their possible precursors between ecosystems and the atmosphere;

(ii) extent, state and productivity of managed and unmanaged ecosystems;

(iii) physical characteristics, such as temperature, albedo, roughness, soil parameters, snow, ice, permafrost, glaciers, lakes and rivers.

(d) Socio-economic parameters, including,

(i) population dynamics;

(ii) urban development;

(iii) type, extent and variability of land use practices;

(iv) economic variables including reserves of natural resources, and geographic characteristics of countries;

(v) technology and practices in energy, forestry, agriculture, transport, hydrology, and industry;

(vi) human health.

3. The Parties, in accordance with Article [V. 2.] (Research [and Development] and Systematic Observation), recognize the need to cooperate in conducting research and development in such areas as:

(a) Process research. Research of the coupled physical, chemical, biological, geological, economic and social processes that affect the Earth's climate system. There is a need for an improved understanding of the processes and development of methodologies governing:

(i) the sources and sinks of greenhouse gases, aerosols, and their precursors, which affect atmospheric concentrations and the possible impact of a climate change;

(ii) atmospheric cycling of radiation, heat and water, with emphasis on cloud formation, dissipation and radiative properties, which influence the response of the atmosphere to greenhouse forcing;

(iii) oceans, which influence geographical distributions and the rate (pace) of the climate change.

(iv) the role of terrestrial systems in hydrological and ecological processes, which affect regional climate change and water availability;

(v) the cryosphere, particularly in polar regions, which affects global sea level changes and regional climate change; and

(vi) economic and social processes, which contribute and react to climate change.

(b) Modelling and prediction. Prediction of the magnitude and rate of future climate change, including an assessment of uncertainties, through the development and validation of integrated climate system models with enhanced regional and national resolution, social and economic models, and the links and feedbacks between climate change and social and economic processes. At a global, regional and national scale, there is a need for:

(i) improved representation within models of processes affecting climate;

(ii) evaluation of the predictability of climate;

(iii) comparison of model output with current observation;

(iv) development of fully coupled climate models.

(c) Impacts. Evaluation of the local and regional impacts of climate change, and identifying the environmental, economic and social consequences. There is a need for an improved understanding of the impact of climate change on the following activities and fields:

(i) natural terrestrial, aquatic and coastal ecosystems and resources;

(ii) agriculture, forestry and fisheries;

(iii) water resources;

(iv) coastal environment;

(v) social systems and economics.

(d) Development of methods for mitigation and adaptation to climate change. In particular:

(i) examining options for reducing sources and/increasing sinks of greenhouse gases aerosols and their precursors;

(ii) examining options for adapting to climate changes;

(iii) development of technologies which are safe, rational and ecologically sound;

(iv) assessing the costs, benefits, and environmental and social consequences of mitigation and adaptation responses.

4. The Parties recognize the particular needs of the developing countries in the following areas:

(a) Observation and data analysis.

(i) it is necessary to help them to increase their capacity to observations and data analysis;

(ii) undertake systematic observations mentioned in sub-paragraphs (a) to (d) of paragraph 2;

(iii) exchange observations with other countries, especially on a regional basis;

(iv) process, locally and at a regional level, data in view to using it for their economic development and studying responses to mitigate and adapt themselves to climate change.

(b) Research and technological innovations.

The aim is simultaneously to, inter alia, promote sustainable development, reduce greenhouse gases emissions, increase the sinks and improve adaptive possibilities to climate changes. This concerns, in particular, the following sectors:

(i) agriculture (reduction of soil carbon emissions, adaptation to drought, limitation of desertification, etc.);

(ii) energy (promotion of bioenergy and other renewable energies, energy conservation etc.);

(iii) forestry (reduction of pressure for deforestation, promotion of forestry for food, stabilization of agriculture); and

(iv) coastal zones and fisheries.

To meet these objectives, developing countries should be able to increase the means spent for:

- training and research;
- technological innovations and research, in cooperation with industrialized or developing countries.]

[ANNEX II

EXCHANGE OF INFORMATION

[The Parties to the Convention shall exchange information [in accordance with V. 3. (Exchange of Information)] [relevant to the objectives of the Convention]. [The Parties recognize that cooperation under this Annex has to be consistent with national laws, regulations and practices regarding patents, trade secrets and protection of confidential and proprietary information.] Such information shall include the following] [It is suggested that the exchange of information, in accordance with Article V. 3., include the following]:

1. Scientific Information

This includes information on:

(a) Planned and ongoing research programmes and activities, both governmental and private [, to the extent such information is available];

(b) Relevant scientific results published in peer-reviewed literature on the understanding of the physics and chemistry of the Earth's atmosphere, the climate system, the oceans and the biosphere and of their susceptibility to change;

(c) Relevant unpublished data and results [, if available];

(d) The assessment of research results and recommendations for future research;

(e) Measures for strengthening and assisting in building national capacity of developing countries;

(f) [[Net] emission inventories including ambient concentrations, emission and removal rates, as well as net emissions, of greenhouse gases and the techniques for systematic observation of these variables] [Techniques for systematic observation of the rates of emission and uptake of greenhouse gases and of their net emissions]; and

(g) Methodologies for the development of [net] emission inventories.

2. **Technological, Technical and Socio-economic Information**

This includes information on:

(a) The availability, feasibility and costs of alternative technologies, and agricultural and forestry practices to reduce emissions and increase sequestration of greenhouse gases, as well as related planned and ongoing research, including appropriate information on relevant safe technologies and related equipment and their manuals and guides;

(b) The limitations involved in using such alternative technologies and agricultural and forestry practices;

(c) National strategies and programmes to mitigate and adapt to climate change, including actions taken, relevant socio-economic information and available assessments of effectiveness; and

(d) Relevant business and commercial activities [, when available].

3. **Legal Information**

This includes information on:

(a) National laws, administrative measures and legal research relevant to the objectives of the Convention;

(b) International agreements, including bilateral agreements, relevant to the objectives of the Convention; and

(c) Methods and terms of licensing and availability of patents relevant to alternative technologies and agricultural and forestry practices.]

[ANNEX III
REPORTING

1. [The manner in which reports would be prepared and their content, should be determined by the individual Party.] Reports submitted pursuant to Article [VII. 1.] (Reporting) [shall subject to paragraph 2, below] [may] contain [,inter alia,] the following information:

[(a) Description of national circumstances including, inter alia population, gross domestic product, land area, CO_2 emissions, CO_2 emissions per capita, relevant national laws [, policies] and administrative measures, [including the use of economic instruments];]

[(b) National inventories of [gross and where possible] [net] emissions of [main] greenhouse gases [and sinks] [prepared in accordance with internationally accepted methodologies] [covering all [main] greenhouse gases and greenhouse gas precursors and all sink enhancement and destruction];]

(c) [For developed country Parties,] [and developing country Parties] [measures] [national strategies] [policies] to mitigate and adapt to climate change [including a description of specific actions being taken or to be taken, with respect to each gas in each sector selected for action by the Party];

[(d) Current projections for annual levels of greenhouse gas emissions and sinks over a ten to twenty year planning horizon;]

(e) Measures taken in fulfilment of the [obligations] [specific commitments] under the Convention, [with particular attention to [reductions of emissions, transfer of financial resources and technology] [energy efficiency and conservation, new [and renewable] energy sources,] [mitigating the adverse consequences of climate change] [protection and enhancement of] sinks, [land use and management,] coastal zone management, transportation and industrial processes [and agriculture];]

[(f) Expected changes and trends in [net] emissions of [main] greenhouse gases [and sinks] [including estimates of the [net] effects of its actions on national [net] greenhouse gas emissions] [and sinks] [with particular reference to the achievement of any target established in the Convention];]

[(g) Contributions to the financial and technology transfer mechanism;]

[(h) For developing country Parties, projects for transfer of technology and financial resources to mitigate and adapt to climate change; [[need for and requirements of financial and technology transfer.] [and estimated gross and incremental costs of projects]];]

[(i) Effective measures in fulfilment of obligations and specific commitments relative to the provision of adequate, new and additional financial resources, and access to and transfer of environmentally sound technology on a preferential and non-commercial basis contributions to the financial mechanism of the Convention and description of programmes for technological cooperation;]

[(j) Description of methodologies used in making its estimates;]

[(k) Efforts [,as appropriate,] to coordinate and harmonize measures to avoid trade distortions;]

(l) Relevant national research [and development] and systematic observation programmes and participation in international programmes;

(m) National [programmes] [measures] and international cooperation with regard to education, training and public awareness [and technology transfer];

[(n) Efforts to implement [obligations] [specific commitments] jointly with another Party or Parties;] and

(o) Such other actions as are relevant to the achievement of the objective of the Convention.

[2. Each industrialised country Party agrees to submit a national report including information on all the items listed in paragraph 1. It shall submit the report to the secretariat no later than one year after the date on which the Convention enters into force for it.

Each least developed country Party agrees to submit a national report including information on at least items (a) and (b) of paragraph 1. It shall submit the report to the secretariat no later than two years after the date on which the Convention enters into force for it.

Each other Party agrees to submit a national report including information on all items listed in paragraph 1. It shall submit the report to the secretariat no late than two years after the date on which the Convention enters into force for it.]

[Possible additional text

3. Further, reports may, on a voluntary basis, identify proposed projects in need of investment (including specific technologies, materials, equipment, techniques or practices that would be needed to implement such projects) and an estimate of the costs and net greenhouse gas emission reduction associated therewith.]

Timing

4. Unless otherwise decided by the Conference of the Parties, reports to update the information contained in the first Report shall be submitted [within [two] [five] years of the date of submission of the first Report and biennially thereafter] [in a frequency that will vary in accordance with the level of CO_2 energy-related emissions per capita, and to be decided by the Conference of the Parties]. [Due account shall be taken of the differentiated [obligations] [capabilities and capacities] [capabilities and responsibilities.]

Confidential Information

5. A Party may designate [the following] [any] type[s] of information contained in its report as confidential[.][:]

[Possible alternative chapeau

A Party and the Advisory Committee on Implementation may agree that certain information contained in the report of that Party is confidential. Categories of confidential information include:]

[(a) Information that is directly related to the national defence [and security] of that Party;

[(b) Information that is of a proprietary commercial nature;]

(c) Information the release of which would result [directly] in [significant] economic or commercial dislocation for that Party; or

[(d) Such other information as [the Party believes is confidential] [agreed upon] [thought necessary by the Party] [by the Party and the Advisory Committee on Implementation].]]]

[ANNEX IV

ARBITRATION

Article 1

Unless the Parties to a dispute otherwise agree, the arbitration referred to in Article [VII. 2.] (Alternative B) (Settlement of Disputes) of the Convention shall be conducted in accordance with the procedure set out in articles 2 to 17 below.

Article 2

The claimant Party shall notify the secretariat of the reference of a dispute to arbitration pursuant to Article [VII. 2.] (Alternative B) (Settlement of Disputes) of the Convention. The notification shall state the subject matter of the arbitration and include, in particular, the articles of the Convention or the protocol, the interpretation or application of which is at issue. The secretariat shall forward the information thus received to all Parties to the Convention or to the protocol concerned.

Article 3

1. In disputes between two Parties, the Arbitral Tribunal shall consist of three members. Each of the Parties to the dispute shall appoint an arbitrator within two months of the notification referred to in Article 2 of this Annex and the two arbitrators so appointed shall designate by common agreement the third arbitrator who shall be the chairman of the Tribunal. The latter shall not be a national of one of the Parties to the dispute, nor have his or her usual place of residence in the territory of one of these Parties, nor be employed by any of them, nor have dealt with the case in any other capacity.

2. In disputes between more than two Parties, Parties in the same interest shall appoint one member of the Tribunal jointly by agreement.

3. Any vacancy shall be filled in the manner prescribed for the initial appointment.

Article 4

1. If the chairman of the Arbitral Tribunal has not been designated within two months of the appointment of the second arbitrator, the Secretary General of the United Nations shall, at the request of either Party, designate the chair within a further two months' period.

2. If one of the Parties to the dispute does not appoint an arbitrator within two months of receipt of the notification referred to in article 2 of this Annex the other Party may inform the Secretary-General of the United Nations, who shall designate the other arbitrator within a further two months' period.

Article 5

The Arbitral Tribunal shall render its decision in accordance with international law, as well as the provisions of this Convention and any protocols concerned.

Article 6

Unless the Parties to the dispute otherwise agree, the Arbitral Tribunal shall determine its own procedure, ensuring that each Party has a full opportunity to be heard and to present its case.

Article 7

The Parties to the dispute shall facilitate the work of the Arbitral Tribunal and, in particular, using all means at their disposal, shall:

a) provide it with all relevant documents, facilities and information; and
b) enable it when necessary to call witnesses or experts and receive their evidence.

Article 8

The Parties and the arbitrators are under an obligation to protect the confidentiality of any information they receive in confidence during the proceedings of the Arbitral Tribunal.

Article 9

Unless the Arbitral Tribunal determines otherwise because of the particular circumstances of the case, the costs of the Tribunal shall be borne by the Parties to the dispute in equal shares. The Tribunal shall keep a record of all the costs, and shall furnish a final statement thereof to the Parties.

Article 10

Any Party to the Convention or, as the case may be, to a protocol thereto, that has an interest of a legal nature in the subject matter of the dispute that may be affected by the decision in the case, may intervene in the proceedings with the consent of the Tribunal.

Article 11

The Tribunal may hear and determine counterclaims arising directly out of the subject matter of the dispute.

Article 12

Decisions both on procedure and substance of the Arbitral Tribunal shall be taken by a majority vote of its members.

Article 13

If one of the Parties to the dispute does not appear before the Arbitral Tribunal or fails to defend its case, the other Party may request the Tribunal to continue the proceedings and to render its final decision. Absence of a Party or failure of a Party to defend its case shall not constitute a bar to the proceedings. Before rendering its final decision, the Arbitral Tribunal must satisfy itself that the claim is well founded in fact and law.

Article 14

The Tribunal shall render its final decision within five months of the date on which it is fully constituted unless it finds it necessary to extend the time limit for a period which shall not exceed a further five months.

Article 15

The final decision of the Arbitral Tribunal shall be confined to the subject matter of the dispute and shall state the reasons on which it is based. It shall contain the names of the members who have participated and the date of the final decision. Any members of the Tribunal may attach a separate or dissenting opinion to the final decision.

Article 16

The final decision shall be binding on the Parties to the dispute and without appeal unless the Parties to the dispute have agreed in advance to an appellate procedure. It shall be complied with by the Parties to the dispute.

Article 17

Any controversy that may arise between the Parties to the dispute as regards the interpretation or manner of implementation of the final decision may be submitted by either Party for decision to the Arbitral Tribunal which rendered it.]

[ANNEX V

INSURANCE MECHANISM

1. The Parties recognize that:

(a) There should be established, as an integral part of the Convention, an International Climate Fund to finance measures to counter the adverse consequences of climate change, and a separate International Insurance Pool (hereinafter referred to as "the Pool") to provide financial insurance against the consequences of sea level rise;

(b) Revenue for the Pool should be drawn from mandatory sources, in particular developed country assessments;

(c) The financial resources of the Pool should be new, additional and adequate;

(d) The Pool should be under the control and direction of the Conference of the Parties; and

(e) The resources of the Pool should be used to compensate the most vulnerable small island and low-lying coastal developing countries for loss and damage resulting from sea level rise.

2. The Parties further recognize that the formulation of a scheme for a Pool involves consideration of the following main questions:

- Methods of funding a Pool;

- Classification of the types of loss to be covered by the Pool;

- Criteria for establishing entitlement to claim against the Pool;

- Methods of evaluating loss resulting from sea level rise; and

- Limitations on the amount of compensation payable by the Pool.

3. The Parties accordingly agree as follows:

(a) The financial burden of loss and damage suffered by the most vulnerable small island and low-lying developing countries (hereinafter referred to as "Group 1 countries") as a result of sea level rise shall be distributed in an equitable manner amongst the industrialized developed countries (hereinafter referred to as "Group 2 countries") by means of a Pool;

(b) The Pool shall be funded by contributions levied on Group 2 countries;

(c) The administrating authority for the scheme (hereinafter referred to as "the Authority") shall be a body controlled on an equitable basis by the Group 1 and Group 2 countries within the framework of the Conference of the Parties;

(d) The contributions referred to in paragraph (b) shall be calculated according to a formula modelled on the 1963 Brussels Supplementary Convention on Third Party Liability in the Field of Nuclear Energy, as follows:

(i) as to 50%, on the basis of the ratio between the gross national product at current prices of each Group 2 country and the total of the gross national products of all Group 2 countries in the year prior to the year in which the contribution was levied (hereinafter referred to as "the contribution year");

(ii) as to 50%, on the basis of the ratio between the total emissions of CO_2 of each Group 2 country and the total CO_2 emissions of all Group 2 countries in the year prior to the contribution year;

(e) Ten years from the date on which the Convention enters into force the Group 2 countries shall contribute to the Pool an agreed percentage of the total of the gross national products of all Group 2 countries in the year prior to the contribution year, apportioned as in paragraph (d), provided that over the ten year period the rate of global mean sea level rise will have reached an agreed figure. If the rate of global mean sea level rise has not reached the agreed figure by the end of the ten year period, a review shall thereafter be carried out at five-yearly intervals and the obligation of the Group 2 countries to contribute to the Pool will not arise until the year following the review in which it is established to the satisfaction of the Authority that the rate of global mean sea level rise has reached the agreed figure or that absolute global mean sea level rise has reached an agreed figure;

(f) The insurance fund so constituted shall be invested by the Authority in interest bearing securities as determined by the Conference of the Parties;

(g) No right to claim against the Pool in respect of loss or damage in any area of a Group 1 country shall arise until:

(i) it shall have been established to the satisfaction of the Authority that the rate of global mean sea level rise and the absolute level of global mean sea level rise has reached agreed figures;

(ii) it shall have been established to the satisfaction of the Authority that the relative mean sea level rise for any insured area in a Group 1 country has reached an agreed level above base levels determined for each area insured (such relative mean sea level figures having been determined within ten years of the Convention coming into force); and

(iii) one year shall have elapsed from the date upon which the figures referred to in sub-paragraph (i) shall have been established as having been reached (that date plus one year being (hereinafter referred to as "the inception date").

(h) In the first instance those areas of Group 1 countries which would be directly affected by sea level rise to a level of an agreed number of centimetres above the base levels referred to in paragraph (g) (ii) shall be valued for insurance. Marketed assets shall be valued on the basis of gross domestic product for the insured area in question. Non-marketed interests shall be valued on the basis of formulae to be agreed;

(i) The insured values covered shall be negotiated between the Authority and the Government of each Group 1 country in accordance with valuation principles to be agreed. The same policy conditions shall be applicable to all Group 1 countries;

(j) All assets and interests intended to be insured under the scheme shall be listed by Group 1 countries for registration with the Authority. Records of assets and interests registered shall be kept up to date. Valuations of assets and interests registered for insurance shall be carried out in accordance with the agreed formulae and shall be assessed as soon as possible after the setting up of the Authority and in any event within ten years of the Convention coming into force. Revaluations shall be carried out periodically as appropriate;

(k) The first period of insurance shall commence on the inception date as defined in paragraph (g) (iii) and shall cover an agreed period following the inception date. Loss or damage occurring within the first and each following period of insurance, if accepted as a valid claim by the Authority, shall be paid out of the Pool as accumulated at the closing date of the period of insurance;

(l) If the funds in the Pool are insufficient to meet all valid claims, the claims shall be paid out on an equitable basis. If, after payment out of all valid claims in full, any surplus shall remain in the Pool, the surplus shall be carried over to the credit of the following insurance period;

(m) Prior to the closing date of the first period of insurance and of each subsequent period, the Conference of the Parties shall, after consultation with the Authority:

(i) Fix the length of the next period of insurance;

(ii) Estimate the probable extent of claims on the Pool during the next insurance period;

(iii) Determine the level of contributions to be levied on Group 2 countries sufficient to meet the estimated claims, after taking account of any surplus carried forward from the preceding period.

(n) Claims against the Pool in respect of insured assets and interests shall be dealt with by the Authority. The Authority shall investigate the cause of any claimed loss, prepare estimates, determine whether the claim comes within the terms of the insurance, evaluate the extent of loss and assess the amount of the claim recoverable by reference to the insured value of the asset or interest and any applicable limits;

(o) All assets in insured areas of Group 1 countries, whether commercially insured or not, shall in the first instance be valued for insurance, but no claims shall be accepted by the Pool in respect of property which at the time loss or damage occurs is insured commercially, whether by a private insurance company or otherwise;

(p) In assessing claims against the Pool, the Authority shall determine whether the loss or damage claimed could have been avoided or mitigated by measures which might reasonably have been taken at an earlier stage. In determining whether measures could or could not reasonably have been taken at an earlier stage, account shall be taken, amongst other things, of the availability of funds, both domestic and international, which would have enabled mitigating or preventative measures to have been taken, and the availability of commercial insurance on reasonable terms; and

(q) If differences of opinion arise between the Authority and the participating countries, every effort shall be made to negotiate a resolution, but if this is not achievable disputes shall be submitted to [an] [the] arbitration tribunal under [a special arbitration scheme] [the Convention].]

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A

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INTERGOVERNMENTAL NEGOTIATING
COMMITTEE FOR A FRAMEWORK
CONVENTION ON CLIMATE CHANGE
Fifth session, First part
New York, 18-28 February 1992

REPORT OF THE INTERGOVERNMENTAL NEGOTIATING COMMITTEE FOR A FRAMEWORK CONVENTION ON CLIMATE CHANGE ON THE WORK OF THE FIRST PART OF ITS FIFTH SESSION, HELD AT NEW YORK FROM 18 TO 28 FEBRUARY 1992

CONTENTS

		Paragraphs	Page
I.	INTRODUCTION	1	3
II.	ORGANIZATIONAL MATTERS	2 - 17	4
	A. Opening of the session	2	4
	B. Attendance	3 - 8	4
	C. Adoption of the agenda	9	6
	D. Documentation	10	7
	E. Organization of work	11 - 12	7
	F. Future work	13 - 16	9
	G. Questions for consideration at the second part of the fifth session	17	9
III.	CONSIDERATION OF ADVICE FROM IPCC	18 - 26	10

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CONTENTS (continued)

		Paragraphs	Page
IV.	REVIEW OF EXTRABUDGETARY FUNDS	27 - 33	11
	A. Special voluntary fund to support the participation of developing countries	28 - 30	11
	B. Trust fund for the negotiating process	31 - 33	12
V.	COMPLETION OF A FRAMEWORK CONVENTION ON CLIMATE CHANGE	34 - 60	12
	A. Report on Working Group I: Commitments	34 - 36	12
	B. Report on Working Group II: Mechanisms	37 - 40	12
	C. Consideration in Plenary	41 - 60	13
VI.	ADOPTION OF THE REPORT	61 - 63	16
VII.	SUSPENSION OF THE SESSION	64	16

Annexes

I.	List of documents before the Committee at its fifth session	17
II.	Revised text under negotiation	19

Cooperation on Science, Research, Information and Education;

Institutional arrangements;

Procedures;

Final Clauses.

39. At its 15th meeting, on 27 February, Working Group II heard an oral report by its Vice-Chairman, Mr. Maciej Sadowski, on the results of the informal consultations he held with legal and scientific experts from delegations on the definitions to be included in a convention.

40. The Working Group transmitted to the Plenary relevant texts for integration into a "Revised Text under Negotiation".

C. Consideration in Plenary

41. At the 2nd and 3rd plenary meetings, on 20 and 24 February, the Co-Chairmen of Working Groups I and II reported on the progress made in their respective Working Groups. At the 3rd plenary meeting, the Chairman made a statement giving an interim assessment of progress made at the session. The Committee also heard a statement delivered on behalf of the Group of 77 and China.

42. At its 3rd plenary meeting, the Committee heard a statement delivered on behalf of a number of non-governmental organizations representing international business. At its 4th plenary meeting, on 28 February, the Committee heard a statement delivered on behalf of a number of environmental non-governmental organizations.

43. At the same meeting, the Vice-Chairman of the Committee, who serves as Rapporteur, reported on his informal consultations with delegations representing the six language groups to check the conformity of the six language texts of the consolidated working document.

44. Also at the 4th plenary meeting, the respective Co-Chairmen of Working Groups I and II presented oral reports to the Committee giving their own impressions on the work accomplished during the session. Dr. E. de Alba, Co-Chairman of Working Group I, speaking on behalf of Mr. Akao and himself, and Mr. R. van Lierop, Co-Chairman of Working Group II, speaking on behalf of Ms. E. Dowdeswell and himself, both drew attention to the time constraints before the Committee in order to have an effective framework convention ready for signature by June of the current year. The Co-Chairmen commented on the usefulness of the informal, open-ended consultations among delegations at the session and praised the continuing support of the secretariat. They agreed that progress had been made at the current session, but emphasized that much remained to be done. The main points of both oral reports are summarized below.

1. Oral report on Working Group I: Summary

45. The Co-Chairman stated that during the discussions in Working Group I priority was given to the section on Commitments. The provisions relating to the stabilization of emissions, financial resources and transfer of technology received special attention. There were also discussions on the Objective and Principles but not on the Preamble.

46. Various parts of the text submitted to the Plenary reflected different intensities of treatment. The wording of the second paragraph of the Objective was slightly modified. In the section on Principles, 7 out of the 11 paragraphs set out in annex II of document A/AC.237/15 were analysed and in some cases revised. The question whether to retain a section on Principles in the Convention had yet to be decided.

47. Attention was drawn to the fact that the Working Group as a whole had not been able to discuss all of the revised paragraphs on Principles and Commitments presented as the outcome of informal consultations. As a result, all new provisions that had not been fully discussed would be marked in the Revised Text to be annexed to the report of the first part of the fifth session of the Committee. It was noted that the Co-Chairmen in preparing the Revised Text would take into consideration comments made by delegations at the closing plenary meeting.

48. In conclusion, the Co-Chairman summarized the session as one in which progress had been slow, but which had produced a text that was better focused on the subject-matter still to be negotiated.

2. Oral report on Working Group II: Summary

49. The Co-Chairman reported that specific text had been negotiated in Working Group II on the following topics: Cooperation on Science, Research, Information and Education; Institutional Arrangements; Procedures; and Final Clauses, and on certain annexes. Owing to time constraints, not all subjects were discussed or negotiated as extensively as might have been wished.

50. He stated that substantial areas of disagreement remained and pointed out that it was hoped that the work accomplished thus far would enable Governments to come prepared, at the second part of the fifth session, to make the necessary compromises to fulfil the goal of having an effective framework convention ready for signature by June of this year.

51. The Co-Chairman indicated that specific progress had been made on Science, Research and Information Exchange, Conference of the Parties, the Secretariat and the Final Clauses. However, he emphasized that the question whether the Convention should establish an Executive Body or an Implementation Committee still remained. In that regard, he stated that progress had also been made in identifying the type of functions that could be assigned by the Conference of the Parties to such a body. In addition, the status of the text on the Science Committee remained unresolved.

52. The Co-Chairman continued by outlining the two distinct proposals on the Resolution of Questions and the Settlement of Disputes stating that these texts could provide the Convention with procedures to address questions of interpretation and application on a friendly and non-adversarial basis as well as with procedures of a more traditional nature.

53. He informed the Plenary of the status of texts on Insurance, Reporting and its Annex, and the Annex on Science. The Plenary was also informed of the deletion of the Annex on Exchange of Information. He stressed that the various texts concerning the Financial Mechanism would need to be dealt with at the second part of the session.

54. The Co-Chairman reported on the informal consultations on definitions chaired by Mr. M. Sadowski, Vice-Chairman of Working Group II. These consultations produced two sets of definitions, the first consisting of technical-scientific terms and the second consisting of only one term: "Regional Economic Integration Organization". The second group of definitions would have to be reviewed in light of the Committee's discussion at the second part of the session on categories of countries. The Co-Chairman informed the Plenary that the Working Group had decided that the entire Article on Definitions would be placed in square brackets pending a decision on whether and how the terms included in the list were to be used in the body of the Convention. The Co-Chairman also noted that IPCC had been requested to comment on the present list of definitions.

55. He concluded by stating that there remained significant areas in which much progress would need to be made and reminded the Plenary that although the work of Working Group II was linked to the progress made in the work of Working Group I more could be agreed to on mechanisms in order not to unnecessarily delay the work of the Committee.

3. Conclusion

56. At its 4th plenary meeting, on 28 February 1992, the Committee noted the submission by the Executive Secretary of the "Revised Text under negotiation", which had been prepared by the secretariat under the guidance of the Chairman of the Committee and the Co-Chairmen of the Working Groups. This Revised Text was indicative of the state of negotiation in the two Working Groups and was intended to facilitate the completion of work on the framework convention. The Committee also noted that an edited version of the Revised Text would be published subsequently as an annex to the report of the Committee on the work of the first part of the fifth session (see annex II).

57. At the same meeting, the Chairman made a statement summing up the work of the session and making proposals for the organization of work on the completion of the framework convention. He expressed satisfaction on balance with the progress achieved in refining formulations and clarifying positions, as well as concern that all the core issues remained to be resolved when the negotiations resumed for the last time. He expressed the conviction that, if Governments showed political vision and pragmatism, the Committee could adopt

an effective framework convention which would be opened for signature at the United Nations Conference on Environment and Development. That was the mandate given by the General Assembly, which the Committee must strive to fulfil.

58. The Chairman proposed that, unless there was any objection, the Executive Secretary should carry out a technical review of the Revised Text. On the basis of that review, the Chairman might make proposals to the Committee, when it resumes its work, concerning ways of resolving secondary questions.

59. The Chairman emphasized the debt of gratitude owed to the Co-Chairmen and Vice-Chairmen of the two Working Groups and to all who had participated in their work. He expressed the view that the potential of the Working Groups had been fully utilized and that it was time to integrate negotiations in the Plenary. He considered that the organization of the second part of the fifth session should be centred on the Plenary, that the Working Groups should be held in suspense and that transparent informal consultations should be held as needed under his authority. He would make detailed proposals on negotiating modalities at the start of the second part of the session.

60. Statements evaluating the progress of work in the Committee and commenting on the Revised Text were made by representatives of seven States, including one on behalf of the Group of 77 and China, one on behalf of the States members of the Alliance of Small Island States participating in the session and a third on behalf of the European Economic Community and its member States.

VI. ADOPTION OF THE REPORT

61. At the 4th plenary meeting on 28 February, the Vice-Chairman, Mr. Ion Draghici, in his capacity as Rapporteur, introduced the draft report (A/AC.237/L.12).

62. The Chairman conducted a reading of the draft report, section by section, during which oral amendments were introduced.

63. The Committee adopted the draft report as amended, authorizing the Rapporteur to reflect therein the proceedings of the 4th plenary meeting and to make any necessary editorial changes.

VII. SUSPENSION OF THE SESSION

64. At the end of the 4th plenary meeting, on 28 February, the Chairman declared the first part of the fifth session of the Committee suspended.

ANNEX II

Revised Text under negotiation

Note by the secretariat

1. The Revised Text has been prepared by the secretariat under the guidance of the Chairman of the Committee and the Co-Chairmen of the Working Groups. It assembles texts that are, in their view, indicative of the state of negotiation in the two Working Groups at the end of the first part of the fifth session. The Revised Text is based, inter alia, upon the Consolidated Working Document contained in Annex II to document A/AC.237/15 and reflects the work on that document during the first part of the fifth session. It is intended to facilitate completion of work on the framework convention.

2. The Revised Text was originally issued as document A/AC.237/Misc.20. The present Annex is an edited version thereof. A few substantive modifications requested by delegations at or after the final plenary meeting on 28 February were approved by the Co-Chairmen and have consequently been included.

3. The Revised Text is presented here as a series of Articles, numbered consecutively, to bring it closer to the form of a convention. This has been done without changing the order or the placement of its elements. The final structure and presentation of the convention will have to be adopted by the Committee.

4. In the Articles on Definitions, Principles and Commitments, paragraphs and subparagraphs identified with an asterisk are those that were introduced into the Working Group by an individual delegation, by a group of delegations or by the Co-Chairmen but not subsequently fully discussed in the Working Group as a whole. The Preamble and paragraphs 1, 6, 7 and 11 of Article 2 on Principles, were not discussed at all by Working Group I during the first part of the fifth session and these have been identified by double asterisks.

5. Subheadings, intended to facilitate the identification of texts, have been retained in Articles 5 to 27, emanating from Working Group II, and in the Annexes. The Committee will have to decide whether any such subheading should be kept in the final text.

CONTENTS

		Page
PREAMBLE		22
Article 1	DEFINITIONS	25
[Article 2	PRINCIPLES]	28
[Article 3	OBJECTIVE]	30
Article 4	COMMITMENTS	31
[4.1.	General Commitments]	31
[4.2.	Specific Commitments]	33
[4.2.1	Stabilization and Reduction of Emissions and Enhancement of Sinks and Reservoirs]	33
[4.2.2	Specific Commitments on Financial Resources	37
[4.2.3	[Technology Cooperation]/[Transfer of Technology]]	37
4.2.4	[To be decided]	38
[4.3.	Special Situations]	38
Article 5	SCIENTIFIC, TECHNICAL AND TECHNOLOGICAL RESEARCH [AND DEVELOPMENT], SYSTEMATIC OBSERVATION AND COOPERATION	40
[Article 6	EXCHANGE OF INFORMATION]	41
[Article 7	EDUCATION, TRAINING AND PUBLIC AWARENESS]	42
Article 8	CONFERENCE OF THE PARTIES	44
Article 9	SECRETARIAT	47
[Article 10]	[IMPLEMENTATION COMMITTEE] [EXECUTIVE COUNCIL] [FUNCTIONS]	48
[Article 11	ADVISORY COMMITTEE ON SCIENCE] [AND TECHNOLOGY] [CLIMATE PROTECTION AND DEVELOPMENT]	53
Article 12	[[ADMINISTRATIVE] [INDEPENDENT FUNDING] MECHANISM FOR FINANCIAL RESOURCES AND TECHNOLOGY TRANSFER] [INTERNATIONAL CLIMATE FUND]	55

CONTENTS (continued)

		Page
[Article 13	INSURANCE] [SMALL ISLAND AND LOW-LYING STATES]	62
Article 14	REPORTING	63
[Article 15	RESOLUTION OF QUESTIONS REGARDING INTERPRETATION AND IMPLEMENTATION OF THE CONVENTION]	65
[Article 16	SETTLEMENT OF DISPUTES]	67
Article 17	AMENDMENTS TO THE CONVENTION	69
[Article 18	PROTOCOLS]	70
Article 19	ADOPTION AND AMENDMENT OF ANNEXES TO THE CONVENTION	71
Article 20	RIGHT TO VOTE	72
Article 21	DEPOSITARY	73
Article 22	SIGNATURE	74
Article 23	RATIFICATION, ACCEPTANCE, APPROVAL OR ACCESSION	75
Article 24	ENTRY INTO FORCE	76
Article 25	RESERVATIONS AND DECLARATIONS	78
Article 26	WITHDRAWAL	79
Article 27	AUTHENTIC TEXTS	80

[ANNEXES]

[I.	[Research [Technological] [[and] Development] and Systematic Observation] [Technological and Scientific Research and Systematic Observation]]	81
[II.	Reporting]	93
[III.	Arbitration]	96
[IV.	Insurance Mechanism]	100

PREAMBLE**

The Parties to this Convention,

1. Acknowledging that [adverse] change in the Earth's climate is a common concern of humankind since a sustainable climate is an essential condition that helps to sustain life,

2. Concerned that [net] emissions resulting from human activities are substantially increasing the atmospheric concentrations of greenhouse gases, and that these increases will enhance the greenhouse effect, resulting on average in an additional warming of the Earth's surface and atmosphere and may adversely affect natural ecosystems and humankind, whilst noting that there are many uncertainties in predictions particularly with regard to the timing, magnitude and regional patterns of climate change,

3. Aware that the adverse effects of such [potential] climate change [and measures to mitigate it] could have [serious] social, economic and environmental consequences,

4. Acknowledging that the global nature of such climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response in accordance with [their respective responsibilities and capabilities]/[the means at their disposal and their capabilities] and their social and economic conditions,

5. Recalling the pertinent provisions of the Declaration of the United Nations Conference on the Human Environment (Stockholm, 1972) and in particular principle 21 [which provides that "States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction" [and accordingly that environmental considerations should not be used as a pretext for interference in the internal affairs of developing countries]],

6. Recalling also the provisions of General Assembly resolution 44/228 of 22 December 1989 on the United Nations Conference on Environment and Development, and resolutions 43/53 of 6 December 1988, 44/207 of 22 December 1989 and 45/212 of 21 December 1990 on Protection of global climate for present and future generations of mankind,

7. Recalling further the provisions of General Assembly resolution 44/206 of 22 December 1989 on the possible adverse effects of sealevel rise on islands and coastal areas, particularly low-lying coastal areas and the pertinent provisions of General Assembly resolution 44/172 of 19 December 1989 on the Implementation of the Plan of Action to Combat Desertification,

8. Noting the Ministerial Declaration of the Second World Climate Conference adopted on 7 November 1990,

[9. Noting the significant contribution made towards combating activities that result in adverse effects on the Earth's climate by the Vienna Convention for the Protection of the Ozone Layer, adopted on 22 March 1985, and the Montreal Protocol on Substances that Deplete the Ozone Layer, adopted on 16 September 1987 and adjusted and amended on 29 June 1990,]

10. Recognizing the need to strengthen international cooperation in addressing adverse effects of climate change [through the development within a global framework of appropriate policies [including the provision to developing countries of adequate, new and additional financial resources [based on assessed contributions by developed countries] and technology transfer on [preferential, concessional and non-commercial]/[fair and most favourable] terms], [the preparation of protocols on specific problems]/[the consideration of additional related instruments as may be agreed] and by means of increased research into atmospheric, terrestrial and marine ecology sciences as well as into the social and economic impacts of climate change and related response strategies, systematic observations, cooperation on scientific, technical, economic and legal matters and exchange of information],

11. Conscious of the valuable work being conducted by many States on global climate change and of the important contributions of the World Meteorological Organization, organs, organizations and bodies of the United Nations system as well as other international and intergovernmental bodies for the exchange of results of scientific research and coordination of research,

12. Recognizing the need for [all] countries [with excessively high per capita rates of anthropogenic carbon dioxide emissions] to take immediate action in a flexible manner on the basis of [short, medium and long term]/[clear priorities, as a first step towards] comprehensive response strategies at the global, national and [, where agreed, regional] levels which take into account all greenhouse gases, with due consideration of their relative contributions to the enhancement of the greenhouse effect and recognizing also that strategies required to understand and address climate change will be environmentally, socially and economically most effective if they are based on relevant scientific, technical and economic considerations and continually re-evaluated in the light of new findi_s in these areas,

13. Aware of the role and importance of sinks and reservoirs in terrestrial and marine ecosystems, inter alia, in the absorption of greenhouse gases,

14. Recognizing that action to reduce emissions of greenhouse gases can also help in solving other environmental problems,

15. Affirming that response to climate change should be coordinated with social and economic development in an integrated manner with a view to avoiding adverse impacts on the latter, taking into full account the legitimate needs of developing countries which have at this time as their main priority the achievement of sustained economic growth and the eradication of poverty, and that therefore the promotion of economic growth in developing countries is essential to address the problems related to climate change,

16. Recognizing that the improvement of the international economic environment, thus promoting the economic growth and sustainable social and economic development, of developing countries, is [essential]/[a prerequisite] for enabling developing countries to participate effectively in the international efforts to address climate change,

17. Recognizing that all countries, especially developing countries, need access to [all the] resources required to achieve sustainable social and economic development and that in order to progress towards that goal, [the energy consumption of developing countries must grow, taking into account the need for greater energy efficiency]/[net emissions of developing countries must grow],

18. Conscious that countries with low-lying coastal, arid and semi-arid areas or areas liable to drought and desertification, small island countries and countries with fragile mountainous ecosystems are particularly vulnerable to the potential adverse impacts of climate change and will therefore require special consideration under this Convention and its [subsequent protocols]/[related legal instruments],

[19. Acknowledging the specific transitional difficulties of those countries, particularly developing countries, whose economies are particularly dependent on fossil fuel production, use and exportation, as a consequence of action taken on limiting greenhouse gas emissions and that these difficulties will need to be recognized in the development of protocols under this Convention,]

20. Bearing in mind the importance of integrating environmental concerns and considerations into policies and programmes in all countries [without introducing any form of conditionality in aid or development financing or constituting a pretext for devising new barriers to trade],

[21. Recognizing that climate policies should be as cost-effective as possible in order to ensure maximum benefits from measures undertaken,]

22. Determined to protect the atmosphere for present and future generations [on the basis of inter-generational as well as intra-generational equity],

Have agreed as follows:

ARTICLE 1

DEFINITIONS

[For the purposes of this Convention:

[I. First Set]

"Adverse effects of climate change" means changes in the physical environment or biota resulting from climate change, which have significant deleterious effects on the composition, resilience and productivity of natural and managed ecosystems or on the operations of socio-economic systems or on human health and welfare.

["Afforestation"* means forest stands established [artificially] [on land which previously did not carry forest.]]

"Climate change" means a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.

"Climate system" means the totality of the atmosphere, hydrosphere, including cryosphere, oceans and all seas, biosphere and geosphere and their interactions.

["Deforestation"* means change of land use or depletion of crown cover to less than 10 per cent.]

"Emissions" means the release of greenhouse gases into the atmosphere [over a specified area and period of time.]

["Forest"* means an ecological system with a minimum of 10 per cent crown cover of trees and/or bamboos, generally associated with wild flora, fauna, and natural soil conditions, and not subject to agricultural practices.]

["Forest"* means an ecological system in which biomass predominates, associated with wild flora, fauna and natural soil conditions, and not subject to seasonal cropping practices].

["Forest degradation"* means changes within the forest class which negatively affect the stand or site and, in particular, lower the production capacity].

"Greenhouse gases" 1/ means those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation, [excluding gases already controlled by other conventions].

["Net emissions" means the difference between the amount of a greenhouse gas released to and the amount removed from the atmosphere by all sources and all sinks, respectively, as created or modified by anthropogenic activities, taken over a specified area and period of time, as calculated by agreed criteria.]

["Net emissions"* means increase in the cumulative atmospheric concentrations of greenhouse gases resulting from anthropogenic activity, depending on the size of the increase in concentration of each greenhouse gas, the radiative property of the gas involved, the length of time the gas is likely to remain in the atmosphere and the concentration of greenhouse gases already present in the atmosphere, calculated by determining their sources and mechanisms for their eventual removal from the atmosphere (their man-made and natural sinks on a global scale)].

"Precursors" 1/ means gases which react chemically in the atmosphere to produce greenhouse gases or which affect the lifetime of greenhouse gases in the atmosphere.

["Reforestation" means the establishment of forest stands [artificially] on land which carried forest within the previous 50 [100] years [or within living memory and involving the replacement of the previous crop by a new and essentially different crop.]]

["Renewable energy" means energy derived from the harnessing of active natural energy flows such as solar, wind, hydrological, biomass, wave and tidal action and ocean thermal energy conversion.]

"Reservoir" means a storage medium for greenhouse gases.

["Sink" means any process or activity which contributes to the removal of a greenhouse gas or the precursor of a greenhouse gas from the atmosphere.]

["Sink"* means a mechanism, natural or man-made, for the removal of greenhouse gases and aerosols from the atmosphere].

1/ [The drafting group notes that the term "greenhouse gases" is used in some places in the Convention to mean "greenhouse gases" only and at other places to mean "greenhouse gases and their precursors". From the point of view of drafting, the group recommends that the terms "greenhouse gases" and "precursors" should be defined in article 1 as proposed above and that the Convention should use the expressions "greenhouse gases" and "greenhouse gases and their precursors" as necessary throughout the text.]

"Source" means any process or activity which releases [or contributes to the release of] a greenhouse gas or a precursor of a greenhouse gas to the atmosphere.

[II. Second Set]

"Regional economic integration organization" means an organization constituted by sovereign States of a given region which has competence in respect of matters governed by this Convention or its protocols and has been duly authorized, in accordance with its internal procedures, to sign, ratify, accept, approve or accede to the instruments concerned.]]

Note:

1. Two additional items were introduced in Working Group II for inclusion in the list of definitions: "aerosols" and "clearing house". Another item introduced at the closing plenary for inclusion in the list of definitions was "global observing network".

2. IPCC will be asked to comment on the list of proposed definitions before the next session.

ARTICLE 2

[PRINCIPLES

1.** The right to development is an inalienable human right. All peoples have an equal right in matters relating to reasonable living standards. Economic development is the prerequisite for adopting measures to address climate change. The net emissions of developing countries must grow to meet their social and economic development needs.

2. All States have a duty to aim at sustainable development for the benefit of present and future generations. Protection of the global climate against human induced change should proceed in an integrated manner with economic development in the light of the specific conditions of each country, [[without prejudice to the socio-economic development of developing countries]. Measures to guard against man-made climate change should be integrated into all relevant national development programmes [taking into account that [evolving] environmental standards] valid for developed countries may have inappropriate and unwarranted social and economic costs in particular in developing countries [and countries with economies in transition]].

[3.* All States have an obligation to protect the [global] climate system for the benefit of present and future generations of humankind on the basis of [intergenerational as well as intragenerational] equity, and in accordance with [their]/[developed and developing countries] common but differentiated responsibilities and capabilities [with a view to achieving convergence [of anthropogenic carbon dioxide emissions] at a common per capita level] and taking fully into account that the largest part of emissions of greenhouse gases has been originating from developed countries [and those countries have the main responsibility] [and should take the lead] in combating climate change and the adverse consequences thereof.]

[4. The Parties shall give full consideration to the specific needs and special circumstances of developing country Parties, especially those developing countries that are particularly vulnerable to the adverse consequences of climate change and also those developing countries which would have to bear a disproportionate or abnormal burden under the Convention.]

5. [Recognizing the need for] Parties to [the Convention shall] take [cost-effective] precautionary measures to anticipate [, prevent, attack] or minimize the causes of, and mitigate the adverse consequences of, climate change. [Where there are threats of serious or irreversible damage,] lack of full scientific certainty should not be used as a reason for postponing such measures.

6.** States shall promote an open and balanced multilateral trading system. Except on the basis of a decision by the Conference of the Parties which should be consistent with the GATT, no country or group of countries shall introduce barriers to trade on the basis of claims related to climate change.

7.** Measures taken to combat climate change should not introduce trade distortions inconsistent with the GATT or hinder the promotion of an open and multilateral trading system.

[8. Those [developed] countries [identified as] [[directly] responsible for causing damage to the environment through inducing climate change]/[which are mainly responsible for emissions of greenhouse gases into the atmosphere] should bear the responsibility for rectifying that damage [.[By openly demonstrating their direct responsibility or negligence, those countries]/[and] shall compensate for environmental damage suffered by other countries or individuals in other countries].]

[9. Climate policies should be cost-effective to ensure global benefits at lowest possible costs. To achieve this, climate policies should be comprehensive, include all relevant sources and sinks of greenhouse gases, comprise all economic sectors, [include both limitation and adaptation measures] and may be implemented in cooperation with other Parties.]

10.* In all fields related to the protection of the climate system, the Parties shall respect and act in accordance with the principle of sovereignty of States, which is applicable in any area of international cooperation.

11.** The need to improve the international economic environment for the developing countries and to promote their sustained economic development are prerequisites for enabling developing countries to participate effectively in the international efforts to protect the global environment including climate protection.]

ARTICLE 3

[OBJECTIVE

The ultimate objective of the Convention and any related legal instruments that might be agreed upon is to achieve, in accordance with the Principles set out in the above Articles, stabilization of greenhouse gas concentrations in the atmosphere at a level which would prevent dangerous anthropogenic interference with climate. Such a level should be reached within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to permit economic activity to develop in a sustainable and environmentally sound manner.

[The anthropogenic emissions of [all] greenhouse gases, particularly carbon dioxide, from States should converge at a common per capita level, taking into account net [carbon]/[greenhouse gas component] emissions during this century as well as the development needs of developing countries.]]

ARTICLE 4

COMMITMENTS

4.1. [General Commitments]

1. The Parties shall, in accordance with the Objective and Principles 2/ stated in the Convention, and particularly in accordance with their common but differentiated responsibilities, taking into account their specific national and regional development priorities, objectives and circumstances, commit themselves to:

(a) Develop, periodically update, publish and make available to the Conference of the Parties national inventories of sources and sinks of all greenhouse gases not controlled by the Montreal Protocol using comparable methodologies agreed upon by the Conference of the Parties;

(b) Formulate, implement, publish, and regularly update national and where appropriate regional [strategies and] programmes containing [nationally determined] measures [which the concerned Party or Parties consider necessary and economically feasible]

- to mitigate climate change [through [control]/[effective limitation] of their [net] emissions of greenhouse gases not controlled by the Montreal Protocol]

- to facilitate adequate adaptation to climate change

[subject in the case of developing countries to the provision of [agreed]/[full] incremental costs by developed country Parties];

[Report on the above paragraph if provided for in Article 14 on reporting]

(c) Promote and cooperate in [, and, as appropriate, adopt [policies and] practices related to] the development, application, and diffusion [, including transfer,] of [environmentally safe and sound,] innovative, efficient, state-of-the-art, lower or non-greenhouse gas emitting technologies, practices and processes 3/

2/ Pending a final decision by the Committee on the inclusion of a section on Principles.

3/ [Explanatory footnote (to appear in the explanation of the text, but not in the definitions): "lower or non-greenhouse gas technologies, processes and practices" include inter alia conservation, energy efficiency, low carbon fuels (e.g. natural gas, nuclear), and renewable energy sources [in addition to sustainable lifestyles.]]

in all sectors, [particularly energy [(including conservation, efficiency and low carbon sources)], transport, industry, agriculture, forestry and waste management], [subject to the provision of funding for developing countries of [agreed]/[full] incremental costs] [, and to the extent that the phenomena will not affect the economic growth of concerned Parties];

(d) Promote and cooperate in the conservation, sustainable management and enhancement, as appropriate, of all sinks and reservoirs of [all] greenhouse gases. [This includes sinks for greenhouse gases other than carbon dioxide in the atmosphere as well as sinks and reservoirs for greenhouse gases [in particular carbon dioxide], in all ecosystems, [in particular terrestrial and marine, with a view to increasing their capacity to act as sinks and reservoirs and promoting their overall health, and [adopt appropriate policies] and take measures [with the aim to elaborate policies] against the degradation of ecosystems, including [policies and] measures to combat drought and desertification [and] against deforestation and forest destruction, and programmes for afforestation and reforestation]], promotion and use of biomass [subject to, in the case of developing country Parties, their national development plans and programmes and the provision of [agreed]/[full] incremental costs involved];

(e) Cooperate in preparations for adaptation to the impacts of climate change; develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture including emergency procedures, coastal zone response mechanisms and adaptation strategies in sectors such as land use planning, agriculture and fragile ecosystems and a global observing system; and undertake assessments of the resilience and adaptability of resources keeping in view the need for poverty eradication in developing countries, taking into account the special situation of least developed countries [on the basis of provision to developing countries of [agreed]/[full] incremental costs involved];

(f) Cooperate in preparing for adaptation to the impacts of climate change in order to support drought and desertification affected countries in their efforts to combat these phenomena and their effects;

(g) (i) Take climate change considerations into account, to the extent possible, in their relevant social, economic and environmental policies and actions;

(ii) Employ appropriate nationally formulated and determined methods, e.g. impact assessments, with a view to minimizing adverse effects of projects or measures taken by the Parties to mitigate or adapt to climate change, on the economy, public health, and quality of the environment;

(h) Promote and cooperate in scientific, technological, technical, socio-economic and other research, systematic observation and development of data archives related to the climate system and aiming to further the understanding and to reduce and clarify the remaining uncertainties regarding causes and effects of climate change and regarding the economic and social consequences of alternative response strategies, [in accordance with Article 5] 4/;

(i) Promote and cooperate in the full, open and timely exchange of relevant scientific, technological, technical, socio-economic and legal information related to the climate system and climate change, and economic and social consequences of alternative response strategies, [in accordance with Article 6];

(j) Promote and cooperate in education, training and public awareness related to climate change and encourage the widest participation in the process, including by non-governmental organizations, [in accordance with Article 7];

[(k)*Develop, coordinate and, as appropriate, harmonize, [in order to avoid distortions to international trade and in accordance with the GATT], relevant economic and administrative instruments[.] [, such as subsidies, taxes and charges, as well as other relevant instruments] aimed at [limiting]/[controlling] net emissions of greenhouse gases;]

[(l)*Within their respective territories, identify [, [examine] and [phase out]/[estimate]] the effects of [government] policies and practices which [protect, subsidize or otherwise] encourage activities that lead to greater levels of emissions of greenhouse gases than [necessary]/[would otherwise occur].]

[4.2. Specific Commitments]

[4.2.1 Stabilization and Reduction of Emissions and Enhancement of Sinks and Reservoirs]*

(a) The developed country Parties [as defined in ...] shall adopt national 5/ policies and take corresponding measures on [mitigation of climate change]/[the limitation of anthropogenic emissions of greenhouse gases and the protection and enhancement of greenhouse gas sinks and reservoirs]. [These

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4/ Need to be coordinated with the procedure devised by Working Group II.

5/ This term would also cover policies adopted by regional economic integration organizations.

parties shall also assist other Parties in adopting similar policies and measures.] [These developed country policies and measures will [have the effect of]/[be aimed at], as a first step, stabilizing individually [or jointly] emissions of [carbon dioxide]/[the total of all greenhouse gases not covered by the Montreal Protocol 6/] [in general by the year 2000]/[as soon as feasible] at [or near] 1990 level], [taking into account the differences in their starting points and approaches and the need for equitable contributions of these Parties].

(Alternative to subpara. (a))*

The developed country Parties shall stabilize emissions of carbon dioxide and other greenhouse gases by 1995 at 1990 levels and thereafter progressively reduce emissions in pursuance of the Objective of the Convention.

(Further alternative to subpara. (a))*

The developed country Parties, as defined in ..., shall adopt national policies and take corresponding measures on the limitation of their net anthropogenic emissions of greenhouse gases. These Parties shall, as agreed in Articles 4.2.2 and 4.2.3 of this Convention, also provide the means to enable the other Parties to adopt necessary measures. These developed country policies and measures shall be aimed at, as a first step, stabilizing individually their net emissions of carbon dioxide and other greenhouse gases not covered by the Montreal Protocol by the year 2000, at the 1990 level, taking into account the differences in their starting points and approaches and the need for equitable contributions of these Parties.

[(b) In accordance with procedures and criteria based on the best available scientific knowledge and agreed to and regularly reviewed by the Conference of the Parties, [any Party which has demonstrated that the [net capacity of greenhouse gas sinks] [within its territory] has increased due to specific measures taken by it since [1990] may include a credit equal to this increase when calculating its emission level.]]

[(c) In accordance with procedures and criteria based on the best available scientific knowledge and agreed to and regularly reviewed by the Conference of the Parties, Parties may implement their [quantitative] commitments under para. (a) in a comprehensive manner that integrates [carbon dioxide and other] greenhouse gases not covered by the Montreal Protocol 6/.]

[(d) Parties undertaking [quantitative] commitments under para. (a) may implement these commitments in cooperation with each other, [provided that the criteria for cooperative arrangements [involving Parties falling under Article 4.3.(5)] are agreed to and regularly reviewed by the Conference of the

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6/ The relationship to the Montreal Protocol, in particular its reduction schedules, needs to be further clarified.

Parties 7/]. The terms of such cooperative arrangements shall be notified to the Conference of the Parties by each of the Parties concerned and described in detail in the report of these Parties in pursuance of Article 14. [The Parties may also implement measures to achieve [quantitative] commitments in cooperation with one or more other Parties, subject to criteria to be agreed to and regularly reviewed by the Conference of the Parties.]]

[(e) The Conference of the Parties shall [as early as possible and] not later than four years after the entry into force of the Convention review the adequacy and operation of subparas. (a)-(d), with a view to taking appropriate decisions on [reductions of anthropogenic emissions of carbon dioxide and other greenhouse gases and the enhancement of greenhouse gas sinks and reservoirs 8/, and such changes in the list of Parties to which specific commitments apply, that may be appropriate] in the light of new developments. Such review shall be carried out in the light of the best available scientific information and assessment on climate change and its impacts as well as relevant technical, social and economic information. Such review shall thereafter take place at regular intervals, determined by the Conference of the Parties, until the objective of this Convention is met.]

(Alternative to subpara. (e))*

[Each developed country Party commits itself to progressively reduce its [net] anthropogenic emissions of carbon dioxide and other greenhouse gases, after 2000 A.D. They shall announce time-bound targets for such reduction not later than four years after the entry into force of this Convention.]

Alternative formulations proposed for Article 4.2.1*

subpara. (a)

line 2

limitation/stabilization

of anthropogenic emissions of greenhouse gases/their net emissions of greenhouse gases

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7/ The possibility of such cooperative arrangements has not been discussed with those Parties. The language of the second part of the sentence is therefore preliminary and will have to be considered further.

8/ The appropriate manner of obtaining the approval of Parties for such decision, whether by protocol or some other legal instrument, will have to be reviewed by legal experts.

lines 3 and 4

these Parties shall also assist other Parties in adopting similar policies and measures/these Parties shall as agreed in Articles 4.2.2 and 4.2.3 of this Convention also provide the means to enable the other Parties to adopt necessary measures

lines 4 and 5

develop country policies and measures will/shall

line 5

stabilizing/stabilizing and subsequently reducing

individually or jointly/individually

line 6

emissions of carbon dioxide/the total of all greenhouse gases not covered by the Montreal Protocol/emissions of carbon dioxide and other greenhouse gases not covered by the Montreal Protocol

line 7

by the year 2000/by the year 1995/as soon as feasible

subpara. (b)

line 1

best available scientific knowledge/proved scientific basis

subpara. (c)

line 1

best available scientific knowledge/proved scientific basis

line 3

carbon dioxide and other greenhouse gases/all greenhouse gases

subpara. (d)

line 7

one or more other Parties/developed and developing country Parties

subpara. (e)

line 2

subparas. (a)-(d)/of Article 4.2.1

line 3

insert "mitigation and adaptation to climate change" after on

line 6

best available scientific information/proved scientific basis

[4.2.2 Specific Commitments on Financial Resources]

Developed country Parties [may provide on a voluntary basis]/[shall commit to the fund established under this Convention, through assessed contributions, adequate, new and additional] financial resources, [separate from agreed Official Development Assistance (ODA) levels,] to meet the [full]/[agreed] incremental costs of developing country Parties, paying particular attention to the needs of least developed countries, [to be provided on a grant basis], [required to fulfil the commitments under]/[to take measures provided for in] this Convention [.]/[; to [cover the adaptation and mitigation costs to developing countries that would be needed as a result of]/[mitigate and adapt to] the adverse consequences of climate change, and the direct and indirect social and economic costs to developing countries that may result from the implementation of the Convention.] [Other Parties [and international organizations and other institutions] in a position to do so may [also contribute]/[provide contributions] on a voluntary basis.] 9/

[4.2.3 [Technology Cooperation]/[Transfer of Technology]]

The Parties shall make every effort to ensure efficient cooperation in and related to technology transfer. [All Parties, particularly] developed country Parties, shall take all practicable steps to [promote the] transfer [of] and [to provide] [assured] access to [environmentally safe and sound] technologies and know-how [on concessional, preferential and most favourable terms] to developing country Parties, paying particular attention to the needs of least developed countries, to enhance their ability to [implement]/[enable them to take measures under] this Convention. [The Parties shall identify and

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9/ Norway has proposed the insertion of the following text after "contributions" on line 2. [according to agreed principles on burden sharing]

France also proposed the insertion of the following text after the last sentence [contributions from other countries and organizations shall be encouraged.]

take appropriate steps to reduce or eliminate unjustifiable barriers to the transfer of technology.] [They should ensure that the [lack of] protection of intellectual property rights does not hinder such transfer.] In this process, the essential role of endogenous capacities and technologies in developing countries should be enhanced and supported by the developed country Parties.

4.2.4 [Title to be decided]

[(a) Developing country Parties shall [in accordance with the Objective and Principles stipulated in Articles 2 and 3 and in accordance with their national development plans, priorities, objectives and specific country conditions] [consider taking feasible]/[undertake] measures to mitigate climate change [through control of [their net] emissions of greenhouse gases [and maintenance and enhancement, where appropriate, of sinks and reservoirs]], [provided that the [agreed]/[full] incremental costs involved are met by the provision of [new, adequate and additional] financial resources from the developed country Parties].]

[(b) Compliance with this Convention by developing country Parties will be dependent upon the effective implementation of the provisions of this Convention on financial resources and transfer of technology.]

[4.3. Special Situations]

1. The Parties shall give full consideration to the specific needs, including for the transfer of technology and/or funding in accordance with the provisions of the Convention, of developing country Parties especially

(a) small island countries;

(b) countries with low-lying coastal areas;

(c) countries with arid and semi-arid areas and forested areas;

(d) countries with areas prone to natural disasters;

(e) countries with areas liable to drought and desertification and forest decay;

(f) countries with areas of high urban atmospheric pollution;

(g) countries with areas with fragile ecosystems including mountainous ecosystems;

(h) countries whose economies are highly dependent on income generated from the production, processing and export, and/or on consumption of fossil fuels and associated energy intensive products; and

(i) land-locked and transit countries.

2. The Parties shall take full account of the specific needs and special situations of the least developed countries in their action with regard to funding and transfer of technology.

[3. The Parties shall develop and adopt a "green plan" with appropriate emergency measures and mechanisms for the protection and recovery of fragile ecosystems, particularly arid and semi-arid areas affected by drought and desertification in Africa, in order to limit their vulnerability to climate change.]

[4.* The Parties shall, in accordance with Articles ... 9/ take into consideration, in the implementation of the commitments of the Convention, and in the adoption of concrete measures, the situation of Parties, particularly developing country Parties, whose economies are highly dependent on the production and/or export of fossil fuels and associated energy intensive products and/or the use of fossil fuels for which such Parties have serious difficulties in switching to alternatives.]

[5.* The Parties recognize that in the acceptance and the implementation of the commitments of the Convention, a certain degree of flexibility has to be given to countries with economies in transition, which are in the stage of transit from centrally planned system to market economy, to enhance their ability to cope with climate change.]

9/ Subject to the formulation of institutions and their functions (conference of the Parties, Implementation Committee, Disputes Settlement Procedures, etc.) to be drafted by Working Group II.

ARTICLE 5

SCIENTIFIC, TECHNICAL AND TECHNOLOGICAL RESEARCH [AND DEVELOPMENT], SYSTEMATIC OBSERVATION AND COOPERATION

1. Each Party shall promote and cooperate in scientific, technological, technical, socio-economic and other research [and development], systematic observation and development of data archives related to the climate system and aiming to further the understanding and to reduce and clarify the remaining uncertainties regarding causes and effects of climate change and regarding the economic and social consequences of alternative response strategies [as elaborated in Annex 1].

Option 1

[2. Parties that do not have the indigenous capability to undertake research and development will be ensured assistance in these areas.]

Option 2

[2. The Parties shall take into account the particular concerns and needs of developing countries and [seek to promote the] [improve their] capacity and capability [of all Parties] to participate in these cooperative efforts.]

Option 3

[2. The Parties shall take into account the particular concerns and needs of developing countries.]

Option 4

[2. The Parties shall take into account the particular concerns and needs of developing countries and seek to improve their capacity and their capability to participate in these cooperative efforts. In doing so, the Parties shall work towards the improvement of the capability of developing countries to collect and assess climate information, prepare net emission inventories, assess possible impacts of global warming and the cost-effective response to it and participate in international research and development programmes and in the promotion of the development and transfer of environmentally safe technologies and technical as well as financial assistance.]

3. The Parties shall support international and intergovernmental efforts to strengthen the observational networks and data collection as well as scientific and technical research capacities particularly in developing countries [for timely exchange of relevant scientific and technological information. Special measures shall be implemented to promote access to data obtained from areas beyond national jurisdiction.]

4. The Parties shall also seek to minimize duplication of effort in research and systematic observation by utilizing, where possible, existing competent international and intergovernmental bodies.

ARTICLE 6

[EXCHANGE OF INFORMATION

In order to achieve the objective of the Convention, the Parties [shall] [may] facilitate and encourage, [taking into account the special circumstances of developing countries,] directly or [, as far as possible,] through [existing] competent international and intergovernmental organizations, full [, open] and timely exchange of relevant scientific, technological, technical, socio-economic and legal [available] information [as described in Annex ...]. [The Parties recognize that cooperation under this Annex has to be consistent with national laws, regulations and practices regarding patents, trade secrets and protection of confidential and proprietary information.]]

ARTICLE 7

[EDUCATION, TRAINING AND PUBLIC AWARENESS

Promotion

1. In order to increase the understanding of climate change [and the uncertainties surrounding it] and to facilitate appropriate responses, the Parties shall promote education, training and public awareness related to climate change.

National

2. At the national [and/or regional] level and in accordance with [national laws and regulations] [the means] at their disposal, the Parties shall promote and facilitate:

(a) The development and implementation of education and public awareness programmes on climate change;

(b) Public access to information on climate change;

(c) Public participation in addressing climate change issues and developing appropriate responses; and

(d) Appropriate training of scientific, technical and managerial personnel.

International

3. At the international level, using existing organizations, institutions and channels where appropriate, the Parties shall cooperate in and promote:

(a) The development and exchange of educational and public awareness material on climate change; and

(b) The development and implementation of education and training programmes, including the exchange or secondment of personnel, in particular for developing countries.

[Alternative to paragraph 3(b)]

(b) The development and implementation of education and training programmes should be carried out by:

(i) Providing courses and skills particularly to developing countries in the developed countries' institutions in the short and medium term;

(ii) In the long term, assist developing countries to build such institutions on their own; and

(iii) Exchange or secondment of personnel to train experts in this field in the developing countries.]]

ARTICLE 8

CONFERENCE OF THE PARTIES

1. A Conference of the Parties is hereby established.

2. The Conference of the Parties shall keep under regular review the implementation of this Convention and any other related legal instruments that the Conference of the Parties may adopt, and make, within its mandate, the decisions necessary to promote the effective implementation of the Convention. To this end, it shall:

(a) Periodically examine the obligations of the Parties and the institutional arrangements under this Convention, in light of the objective[s] of the Convention, the experience gained in its implementation and the evolution of scientific knowledge;

[(b) Consider the information submitted in accordance with Article 14 (Reporting) [to assess, inter alia,] [the implementation by the Parties of the Convention], the overall environmental, economic and social effects of the measures taken pursuant to the Convention and the extent to which the objective[s] of the Convention is being achieved;]

(c) Consider the reports submitted by its subsidiary bodies; [and perform the functions assigned to it under Articles [11] (Advisory Committee on Science) [10] (Advisory Committee on Implementation) [15] (Resolution of Questions)];

[(d) Examine the form of and intervals for submission of the reports referred to in subparagraphs (b) and (c);]

(e) Consider and adopt regular reports on progress in the implementation of the Convention and ensure their publication;

(f) [Provide policy direction and establish criteria [including priorities and selection of projects] for the functioning of the mechanism[s] for financial resources and transfer of [environmentally safe] technology];

Alternative to (f):

[Perform the functions assigned to it under Article 12. (Financial Mechanism), [13] (Insurance) and [Article ...] (Joint Implementation)];

(g) Perform the functions assigned to it by Article [15] (Resolution of Questions) [and Article [10] (Committee on Implementation)];

(h) Seek, where appropriate, the services and cooperation of, and utilize the information provided by, appropriate international organizations and intergovernmental [and non-governmental] bodies [with observer status];

(i) Promote the exchange of information on, and the coordination, as appropriate, of, policies, strategies and measures to address climate change, taking into account the differing circumstances [respective responsibilities] and capabilities of the Parties;

[(j) Seek to mobilize [new and additional] financial resources in accordance with Article [4.2.2.];]

(k) Promote public awareness of the climate change issue;

(l) Consider questions related to research [and development] and systematic observation; exchange of information; education, training and public awareness; scientific, [technological] and [technical] cooperation;

[(m) Consider questions [on cooperation related to transfer of technology] [and endogenous capacity building, in particular in developing countries;];]

(n) Establish such subsidiary bodies as are deemed necessary for the [implementation] [operation] of the Convention;

(o) Agree upon and adopt [, by consensus,] rules of procedure for itself and for any subsidiary bodies that are established by or under the Convention;

(p) Agree upon and adopt [, by consensus,] budgets and financial rules for itself and for any subsidiary bodies that are established by or under the Convention;

(q) Consider and adopt, as may be agreed in accordance with the relevant articles, amendments to this Convention, additional annexes and amendments of annexes to this Convention;

(r) Consider and adopt, as may be agreed in accordance with Article [18] (Protocols), any [protocol] [other related legal instruments] to this Convention;

(s) Make recommendations on any matters necessary for the implementation of the Convention; and

(t) Exercise such other functions as are conferred on it by this Convention [or as are required for the achievement of its objectives].

3. The rules of procedures referred to in paragraph 2(o) shall be adopted at the first meeting of the Conference of the Parties by consensus and shall include decision-making procedures for matters not already covered by decision-making procedures specified in this Convention. Such procedures may include specified majorities required for the adoption of particular decisions.

Meetings

4. The first meeting of the Conference of the Parties shall be convened by the interim secretariat established under Article 9 not later than one year after entry into force of the Convention. Thereafter, ordinary meetings of the Conference of the Parties shall be held at least every two years unless otherwise decided by the Conference.

5. Extraordinary meetings of the Conference of the Parties shall be held at such other times as may be deemed necessary by the Conference, or at the written request of any Party, provided that, within six months of the request being communicated to the Parties by the secretariat, it is supported by at least one third of the Parties.

Observers

Option 1

[6. The United Nations, its specialized agencies and the International Atomic Energy Agency, as well as any State [member or observer of the UN or its specialized agencies] [and permanent observers to the UN] not Party to this Convention, may be represented at meetings of the Conference of the Parties as observers. Any body or agency, whether national or international, governmental or non-governmental, qualified in matters covered by the Convention that has informed the secretariat of its wish to be represented at a meeting of the Conference of the Parties as an observer may be admitted unless at least one third of the Parties present object. The admission and participation of observers shall be subject to the rules of procedure adopted by the Conference of the Parties.]

Option 2

[6. The United Nations, its members and observers, specialized agencies, the International Atomic Energy Agency, as well as any state not Party to this Convention, may be represented at meetings of the Conference of the Parties as observers. Other agencies that have informed the secretariat of their wish to be represented may be admitted in accordance with the rules of procedures.]

ARTICLE 9

SECRETARIAT

Establishment

1. A secretariat is hereby established.

Functions

2. The functions of the secretariat shall be:

(a) To arrange for and service meetings of the Conference of the Parties and its subsidiary bodies established under the Convention;

(b) To compile and transmit reports submitted to it;

[(c) To prepare reports on its activities and present them to the Conference of the Parties;]

[(d) To [cooperate] [assist the developing countries], upon request, in the compilation of national reports;]

(e) To ensure the necessary coordination with other relevant international [and intergovernmental] bodies and, in particular, to enter into such administrative and contractual arrangements as may be required for the effective discharge of its functions; and

(f) To perform the functions specified in this Convention or any other functions as may be determined by the Conference of the Parties.

Designation of interim secretariat

3. The secretariat functions will be carried out on an interim basis by the ad hoc secretariat until the completion of the first ordinary meeting of the Conference of the Parties held pursuant to Article [8] (Conference of the Parties). At its first ordinary meeting the Conference of the Parties shall designate a secretariat.

ARTICLE 10

[IMPLEMENTATION COMMITTEE] [EXECUTIVE COUNCIL] [FUNCTIONS]

Option 1

[1. An [Implementation Committee] [Executive Council] is hereby established. It will be [open-ended] representing all the Parties [composed of fifteen members] [and elected by the Conference of the Parties by a majority of the Parties present and voting]. [The Conference of the Parties may increase this number without exceeding a quarter of the number of contracting Parties.] The members shall be government representatives who are experts on matters related to climate change.

2. The [Implementation Committee] [Executive Council] shall in particular:

(a) Ensure the implementation of the decisions of the Conference of the Parties, as instructed by the latter;

(b) Prepare, where appropriate, the deliberations of the Conference of the Parties;

(c) Oversee the dissemination of information to all Parties about measures taken by other Parties on the basis of [reports] [exchange of information] submitted in accordance with Article 14 (Reporting);

(d) Review the implementation by the Parties of their obligations and the progress made in this respect through an evaluation of their national reports submitted in accordance with Article 14 (Reporting). The Committee shall, inter alia:

(i) Advise individual Parties, at their request, on the ways and means of meeting the reporting requirements set forth in Articles 14 (Reporting), including the development of national climate change strategies;

(ii) Review and consult with individual Parties on the [report submitted by] [information received from] those Parties in accordance with Article 14 (Reporting) and request, as necessary, additional information or clarification thereon;

(iii) Seek, receive and consider relevant information from competent international and intergovernmental bodies and non-governmental organizations;

(iv) Consult with, and seek the advice of, the Advisory Committee on Science, as necessary;

(e) Seek to establish at each stage of the review process a close dialogue with the Parties concerned and to come to consensual solutions on questions that may arise;

(f) Carry out any other function the Conference of the Parties may confer on it; and

(g) Oversee and give additional guidance, within the framework of the decisions of the Conference of the Parties, to other subsidiary organs of the Convention [and especially to the financial mechanism of the Convention].

3. The [Implementation Committee] [Executive Council] shall, with the assistance of the secretariat, prepare an annual report on the [implementation] [overall operation] of the Convention and propose the measures it deems appropriate to the Conference of the Parties. This report shall be transmitted to all Parties by the secretariat and shall be published.

4. The first meeting of the [Committee/Council] shall be convened not more than six months after the first meeting of the Conference of the Parties. Unless the Conference of the Parties decides otherwise, subsequent meetings shall be convened at least twice a year.

5. The [Committee/Council] shall elect from among its members, a chairman and two vice-chairmen and a rapporteur, each to serve for a term of two years, and who may, subject to re-election, serve additional terms.

6. The [Committee/Council] shall agree upon and adopt its rules of procedure and any amendments thereto, by consensus.]

Option 2

[The Conference of the Parties shall, at its first meeting, establish a subsidiary body [or bodies] to assist it in preparing for its work under Article 8 [, particularly Article 8 (2)(b)]. Such body [or bodies] shall operate in an objective and consultative manner.

[Possible sentence on membership]

[Such bodies [or bodies] shall perform the following functions:

[(a) ensure the implementation of the decisions of the Conference of the Parties;]

[(b) prepare the deliberations of the Conference of the Parties;]

[(c) provide assistance to Parties, at their request, on meeting reporting requirements [from a technical point of view];]

[(d) consider individual reports [from an essentially technical point of view], in preparation for the work of the Conference of the Parties under Article 8 [2(b)];]

[To this end, it shall:

[(i) consult, if necessary, with a Party, to give it an opportunity to make [technical] clarifications;]

[(ii) determine whether a report has been submitted, and whether the report is complete;]

[(iii) consider whether the estimated [net] greenhouse gas emissions reductions have been or would be realized as a result of the identified measures;]

[(iv) consider whether methodologies used are technically valid;]

[(v) consider whether, if proposed projects have been identified, they would be likely to achieve estimated [net] greenhouse gas emissions reductions;]

[(vi) prepare a report of a descriptive nature for the Conference of the Parties on the above, which might include suggestions and which shall include evaluation of overall effects of measures taken pursuant to the Convention;]]

[(e) seek, receive and consider, as necessary, relevant information from competent international and intergovernmental bodies and non-governmental organizations;]

[(f) consult with and seek the advice of other subsidiary bodies, as necessary;]

[(g) perform the functions assigned to it under Article 15 (Resolution of Questions);] [and Article 16 (Settlement of Disputes)] and

[(h) perform such other functions as may be assigned to it by the Conference of the Parties.]]

Option 3

[The Conference of the Parties [shall] [may] [at its first meeting,] establish [a subsidiary body [or bodies]] [a mechanism under its auspices] to assist it in preparing for its work [under Article 8] [, particularly Article 8 (2)(b)]. Such [body [or bodies]] [mechanism] shall operate in an [objective and] [consultative] manner [, in support of the Conference of the Parties in performing the functions spelled out in Article 8].

[Possible sentence on membership]

[Such body [or bodies]] [such a mechanism] shall perform the following functions:

[(a) ensure [the provisions of adequate, new and additional financial resources and transfer of technology on preferential and non-commercial terms for] the implementation of the decisions of the Conference of the Parties [by developing country Parties];]

[(b) prepare the deliberations of the Conference of the Parties] [, if necessary, and as decided by the Conference of the Parties by consensus];]

[(c) [provide] [ensure the provision of] assistance to Parties, at their request, on meeting [reporting] requirements [for information exchange] [from a technical point of view];]

[(d) consider [individual reports] [all information received] [the exchange of information] [from an essentially technical point of view] [, in preparation for the work of the Conference of the Parties under Article 8 [2(b)];]

[To this end, it shall:

[(i) consult, if necessary, with [a Party,] [, Parties] [on the preparation of the work of the Conference of the Parties] [to give it an opportunity to make [technical] clarifications];]

[(ii) determine whether a [report] [information] [from all Parties are received] [has been submitted, and whether the report is complete];]

[(iii) consider whether the estimated [net] greenhouse gas emissions reductions [by developed countries] [and developing countries] have been or would be realized as a result of the identified measures;]

[(iv) consider whether [methodologies used are technically valid] [technical support for the developing countries has been adequately rendered];]

[(v) consider whether [, if proposed projects have been identified, they would be likely to achieve estimated [net] greenhouse gas emissions reductions] [specific commitments are made by the [developed countries] [and developing countries];]

[(vi) prepare a report of a descriptive nature for the Conference of the Parties on the above, which might include suggestions and which shall include evaluation of [overall effects of measures taken pursuant to the Convention] [the fulfilment of the specific commitments by [developed countries] [and developing countries]];]

[(e) seek, receive and consider, as necessary, relevant information from competent international and intergovernmental bodies and non-governmental organizations;]

[(f) consult with and seek the advice of other subsidiary bodies, as necessary;]

[(g) perform [only] the functions assigned to it [under Article 15 (Resolution of Questions)] [and Article 16 (Settlement of Disputes)] [under this Convention];]

[(h) confirm to the Conference of the Parties that Parties have fulfilled their reporting and other commitments under this Convention and that, where appropriate, they are therefore eligible for funding under the Financial Mechanism;]

[(i) [ensure the adequate protection of intellectual property rights in all issues related to transfer of technology and information] [, taking into account the need for due flexibility in the protection of intellectual property rights for the fulfilment of the objectives of this Convention];] and

[(j) perform such other functions as may be assigned to it by the Conference of the Parties.]]

ARTICLE 11

[ADVISORY COMMITTEE ON SCIENCE] [AND TECHNOLOGY]
[CLIMATE PROTECTION AND DEVELOPMENT]

1. An [Advisory Committee on Science] [and Technology] [Science Mechanism] [under the auspices of the Conference of the Parties] is hereby established [, in pursuit of the objectives of the Convention].

2. The [Committee] [mechanism] shall provide the Conference of the Parties, [and as appropriate its other subsidiary bodies] with timely information [and advice] [on scientific aspects of this Convention], [including the fields of natural, [technological] physical [and] social [and economic] sciences, related to climate change including, [its impacts on ecosystems and relationship to development].

3. Alternative A

The [Committee] [Mechanism] shall comprise [x] [persons of recognized competence in relevant fields of expertise] [competent government representatives] [sitting in their individual capacity] [selected by the Conference of the Parties by methods to be decided at its first meeting] [on the basis of equitable/geographical [distribution] [representation]]. [The [Committee] [Mechanism] shall be open ended.]

[Its functions shall include [providing to the Conference of the Parties in terms most useful to it] [inter alia]:

(a) Regular [assessments] [interpretations] of [the state of scientific knowledge on sciences related to climate change drawn from] the reports of competent [interational, intergovernmental] [and non-governmental] scientific [bodies] [research] [related to climate change];

(b) [Updating best available knowledge on sciences related to climate change];

(c) Suggest priorities for scientific [programmes and] research and international cooperation, [and make recommendations on ways and means to support endogenous capacity building in developing countries] [in accordance with Article ...];

(d) Analyse [the impacts of and responses to] climate change [and their impacts] [on ecosystems and] [development];

(e) [Respond to questions raised by the Conference of the Parties in the fields within its mandate;] [on scientific aspects of the Convention];

[(f) Review from the scientific viewpoint the effects of measures taken in the implementaiton of the Convention;]

[(g) Identify innovative, efficient and state of the art technologies and know-how and advice on the ways and means to ensure transfer of such technology;]

[(h) Review the adequacy of international cooperation in research and development and make recommendations to the Conference of the Parties;] and

[(i) The Committee shall perform any other function to be conferred by the Conference of the Parties].]

Alternative B

[The functions, membership and operations of the [Committee] [Mechanism] shall [may be specified or modified] be decided by the Conference of the Parties [at its first meeting].]

Alternative C

[For the purposes of the Convention, the Advisory Committee shall take up responsibility for all functions so far carried out by the Intergovernmental Panel on Climate Change, which, upon the entry into force of this Convention, will be invited, by the Parties, to integrate the structure of the Convention, under the Advisory Committee. The Advisory Committee shall, besides incorporating the functions until now undertaken by the Intergovernmental Panel on Climate Change, provide regular assessments on questions related to developmental concerns and implications of the new regime for cooperation on climate change, as set forth in this Convention.]]

ARTICLE 12

[[ADMINISTRATIVE] [INDEPENDENT FUNDING] MECHANISM FOR FINANCIAL RESOURCES AND TECHNOLOGY TRANSFER] [INTERNATIONAL CLIMATE FUND]

Option 1 - Alternative A

[A mechanism for financial resources and the [transfer of technology] is hereby established. It shall include a [Climate Fund.] [It may also include other modalities for the provisions of financial resources under this Convention.] The Financial Mechanism/Fund shall operate under the authority of the Conference of the Parties.

The Parties shall establish appropriate arrangements for the administration of the financial and [the transfer of technology] mechanism/Fund. [The Executive Committee of the Parties/or another body designated by the Parties] shall, with the consent of the Conference of the Parties, develop and monitor the implementation of the specific operational policies [, including the selection of projects,] for the purposes of achieving the objectives of the Financial Mechanism/Fund. [The Financial Mechanism/Fund shall be administered as a Trust Fund by the Global Environmental Facility (GEF) of IBRD/UNDP/UNEP.]]

Option 1 - Alternative B

Establishment

[1. An [administrative] [independent funding] mechanism for [the administration] of the financial resources and the transfer of [safe and sound] technology, with a democratic and transparent system of governance, [and equitable participation by developed and developing countries] is hereby [established] [designated under the auspices of ...].]

[Possible Alternative Text

A financial mechanism is hereby established. The financial mechanism shall operate under the authority of the Conference of the Parties who shall decide on its overall policies. The Executive Committee of the Parties shall, with the consent of the Conference of the Parties, develop and monitor the implementation of the specific operational policies for the purpose of achieving the objectives of the financial mechanism.]

[Possible Additional Text

The financial mechanism shall include a Climate Fund which shall be administered as a Trust Fund by the Global Environment Facility of IBRD/UNDP/UNEP. The Climate Fund shall meet on a grant or concessional basis the agreed incremental costs of developing countries referred to in Article ...]

Functions

[2. The [administrative] mechanism for financial resources and [safe] technology transfer shall:

[(a) Be responsible for the administration of funds, including those funds related to the promotion of [preferential and non-commercial] transfer of [safe] technology, provided by the Parties for the fulfilment of the obligations of the Convention;]

(b) Be accountable to the Conference of the Parties for its allocation of the funds and for ensuring that the funding priorities and criteria established by the Conference of the Parties are adhered to in its financial activities;

(c) Be responsible for receiving assessed and other contributions, either financial or as otherwise provided by Parties and other bodies, in accordance with criteria set out by the Conference of the Parties;

(d) Establish appropriate accounting procedures to ensure that all assessments and contributions made to fulfil obligations of the Convention are properly recorded, credited and accounted for;

(e) Be responsible for facilitating the identification and selection of projects to support the efforts of Parties to [meet] [implement] their obligations [jointly] under this Convention;

Functions related to transfer of technology

[(f) Pursuant to the operational guidelines and policy direction of the Conference of the Parties, coordinate the appropriate procedures and take the necessary steps to promote, facilitate and enable the transfer of technology;]

[(g) Provide funding to purchase requisite technologies for the implementation of projects undertaken by developing country Parties under the mechanism set up by the International Climate Fund;]

[(h) Promote, and finance when necessary, the exchange of and access to technological information required by the Parties. The technological information should include inter alia, the environmentally sound and safe technologies including those that have been neglected or displaced, the technological options, trading conditions, implementation costs and technological security;]

[(i) Coordinate ways and means to develop long-term technological partnerships between the holders of environmentally sound technologies and potential users in Parties, particularly developing countries, taking into account their national objectives and policies;]

[(j) Organize, when requested by a recipient Party, or group of recipient Parties and on terms and conditions set out by such recipient countries, international competitive bidding to purchase requisite technologies for transfer to the requesting Parties;]

[(k) Provide requested support to a recipient Party or group of recipient Parties to assess the offers presented in international competitive bidding, to enable the requesting Parties to obtain the most favourable terms and conditions, including inter alia, in terms of price, transfer of know-how, high safety and environmental requirements, training, supply of spare parts, and maintenance;]

[(l) Ensure the development of endogenous capacity building in developing country Parties, including technologies in the public domain, in accordance with their development plans, objectives and priorities of these countries, through, inter alia, the supply of necessary equipment, expertise and facilities for research and development, and the training of scientific, technical, and managerial personnel;]

(m) Finance its operations from a fund, separate from its programme resources, established specifically to cover its administrative expenses;

(n) Provide annual reports to the Conference of the Parties on its operations and, inter alia, on evaluation and assessment of the effectiveness of its functions and, as required, information to the subsidiary bodies of the Conference of the Parties, in order that they can fulfil their mandates;

[(o) Administer the [joint implementation] [cooperative system of exchange] of [emissions commitments] [commitments on emissions [of greenhouse gases] and enhancement of all sinks] according to the terms of the Convention;]

[(p) Administer operations required of it by protocols to this Convention, and any other matters agreed on by the Conference of the Parties;] and

[(q) Explore ways and means to employ financial resources to promote the flexibility of intellectual property rights with a view to promoting the transfer of sound technology to developing countries.]]

Option 2

[1. The Parties hereby designate the Global Environment Facility (GEF) established and operated jointly by IBRD/UNDP/UNEP as the mechanism for the provision of financial resources to Parties in need of assistance in meeting agreed incremental costs of implementing this Convention.

2. The Conference of the Parties shall, in accordance with relevant rules of procedure, establish appropriate arrangements with the GEF to implement paragraph 1 above. Such arrangements shall include inter alia:

(a) modalities to promote the involvement of the Parties in the GEF [with a view to ensuring a transparent system of governance of the mechanism and a balanced representation of developed and developing country Parties]; 10/

(b) provision for the GEF in funding projects related to the convention to [comply with]/[consider] the [policy and] programme priorities and eligibility criteria established by the Conference of the Parties;

(c) provision for receipt by the GEF of requests from Parties in need of assistance in meeting agreed incremental costs of implementing this Convention;

(d) provision by the Conference of the Parties or its subsidiary bodies to the GEF of information that might promote the implementation of this Convention, including the establishment of cooperative linkages between the STAP and scientific and technical bodies established under this Convention;

(e) provision by the GEF of regular reports through the Convention Secretariat to the Conference of the Parties on its operations related to the implementation of this Convention, including projects selected; financial expenditures; current and anticipated funding reserves; the relationship between its operations related to the implementation of this Convention and other assistance it is providing in sectors relevant to climate change; and other information of interest to the Conference of the Parties;

(f) provision for the Conference of the Parties to request the GEF to reconsider a particular funding decision in the light of the criteria and priorities referred to in paragraph 2 (b);

10/ The portion in square brackets is not a legal text.

3. The Conference of the Parties shall periodically assess the operation of the GEF as the mechanism for the provision of financial resources related to the implementation of this Convention, with a view to modifying the arrangements under paragraph 2 as may be appropriate.

[4. Parties may also provide assistance related to the implementation of this Convention through bilateral or other multilateral channels. In this regard, interested Parties may meet, on an ad hoc basis, to consider whether any Party is interested in assisting another Party in the implementation of a proposed project the latter has identified in its national report. Parties may, as appropriate, invite representatives of multilateral financial institutions to such meetings for the purpose of providing them with an opportunity to consider projects for inclusion in their development assistance portfolios.]]

Option 3

Establishment

[1. An International Climate Fund is hereby established under the authority of the Conference of the Parties which shall decide on its overall policies and operations, in particular determining priorities, criteria and selection of projects and activities to be funded. It shall be distinct and independent from other funds and international financial institutions.

2. The mechanism for financial resources and transfer of technology set up under the International Climate Fund, shall be administered as follows:

Functions relating to financial resources

(a) Meet on a grant basis the full incremental costs of measures taken by developing country Parties to address climate change, in accordance with criteria to be developed by the Conference of the Parties;

(b) Cover the costs to developing country Parties of adaptation and mitigation measures that may be needed as a result of the adverse consequences of climate change and the direct and indirect social and economic costs to developing countries that may result from the implementation of the Convention;

(c) Be responsible for receiving assessed and other contributions, either financial or as otherwise provided by Parties and other bodies, in accordance with criteria set out by the Conference of the Parties;

(d) Establish appropriate accounting procedures to ensure that all assessments and contributions made to fulfil the obligations of the Convention are properly recorded, credited and accounted for;

(e) Be responsible for facilitating the identification and selection of projects and activities for supporting the efforts of the Parties to meet their obligations under this Convention;

(f) Finance the secretariat services of the Fund and related support costs;

(g) Provide an annual report to the Conference of the Parties on its operations and, as required, information to the subsidiary bodies of the Conference of the Parties, in order that they can fulfil their mandates; and

(h) Provide, in general, funding for projects and activities organized under this Article and in accordance with the provisions set out by this Convention.

Functions related to transfer of technology

(i) Pursuant to the operational guidelines and policy direction of the Conference of the Parties, coordinate the appropriate procedures and take the necessary steps to promote, facilitate and enable the transfer of technology;

(j) Provide funding to purchase requisite technologies for the implementation of projects undertaken by developing country Parties under the mechanism set up by the International Climate Fund;

(k) Promote, and finance when necessary, the exchange of and access to technological information required by the Parties. The technological information should include inter alia, the environmentally sound and safe technologies including those that have been neglected or displaced, the technological options, trading conditions, implementation costs and technological security;

(l) Coordinate ways and means to develop long-term technological partnerships between the holders of environmentally sound technologies and potential users in Parties, particularly developing countries, taking into account their national objectives and policies;

(m) Organize, when requested by a recipient Party, or group of recipient Parties and on terms and conditions set out by such recipient countries, international competitive bidding to purchase requisite technologies for transfer to the requesting parties;

(n) Provide requested support to a recipient Party or group of recipient Parties to assess the offers presented in international competitive bidding, to enable the requesting parties to obtain the most favourable terms and conditions, including inter alia, in terms of

price, transfer of know-how, high safety and environmental requirements, training, supply of spare parts, and maintenance; and

(o) Ensure the development of endogenous capacity building in developing country Parties, including technologies in the public domain, in accordance with their development plans, objectives and priorities of these countries, through, inter alia, the supply of necessary equipment, expertise and facilities for research and development, and the training of scientific, technical, and managerial personnel.]

ARTICLE 13

[[INSURANCE] [SMALL ISLAND AND LOW-LYING STATES]

Option 1

[The Parties shall establish separate supplementary financial mechanisms to assist developing countries, particularly least developed countries, vulnerable [small island and low-lying] coastal developing countries [and developing countries with vulnerable mountain areas] [and countries suffering from desertification or drought] to prevent or mitigate the adverse consequences of sealevel rise [and drought and desertification] resulting from climate change, as specified in [Annex IV] (Insurance Mechanism).]

Option 2

[The Conference of the Parties shall consider what action is necessary under the Convention to meet the concerns of the most vulnerable small island and low-lying developing countries about the adverse consequences of sealevel rise.]

Option 3

[The Parties shall establish separate supplementary financial mechanism[s] to assist developing countries, particularly those most vulnerable among them, to counter, mitigate, and/or adapt to the adverse consequences of climate change. The details of such mechanism[s] shall be specified by the Conference of the Parties.]

Option 4

[The Conference of the Parties shall [at its first meeting] consider [the establishment of an insurance scheme] [what action is necessary] to meet the [concerns] [needs] of the Parties which are vulnerable small island or vulnerable low-lying coastal developing countries relating to the adverse consequences of sealevel rise.]]

ARTICLE 14

REPORTING

1. Each Party [shall], [in accordance with its capabilities,] prepare, submit and periodically update a report containing the information [set forth in Annex II] including the measures it is taking to implement the Convention. [For developing country Parties, the fulfilment of this obligation will be conditional on the availability of corresponding new and additional financial resources.] [The availability of financial resources from the financial mechanism shall be contingent upon the full implementation of this obligation.]

[2. Each Party shall submit an initial report within x years of entry into force of the Convention for it [, except that for each country defined as a developing country for the purposes of this Convention, an initial report shall be submitted within y years of the Convention coming into force for it,] and further that a least developed country may submit its first report within [z] years of the Convention coming into force for it [or within four years of receipt of financial resources from the fund established under this Convention, whichever is the later]. The frequency of subsequent reports for all Parties shall be determined by the Conference of the Parties. [For developing country Parties,] financial and technical [assistance] [cooperation] in the preparation of such reports shall [, if they so request,] be [provided through procedures developed under the provisions of Article 12] [determined by the financial mechanism identified in Article 12].

[3. The developing country Parties to this Convention shall be assisted in the preparation of the report. Such assistance will include both technical and financial assistance as well as the identification of the technical and financial needs associated with the implementation and review of such reports.]

[4. Any group of Parties may, subject to prior notification to the Conference of the Parties and any guidelines adopted by the Conference of the Parties, submit a single report in fulfilment of their obligation under paragraph 1 above, provided that such report includes information on each Party's fulfilment of its individual obligations.]

[5. The reports submitted by the Parties shall be transmitted by the secretariat, as soon as possible, to the Conference of the Parties [and to the (names of any subsidiary bodies concerned with the implementation).]

[6. Information contained in the reports, designated as confidential by the supplying Party in accordance with [Annex II] [criteria to be defined], shall not be disclosed by any of the bodies concerned with the reports. 11/

[7. Subject to the provisions of paragraph 5, and without prejudice to the ability of any Party to make public its report, the secretariat shall make, the reports submitted by Parties publicly available [at the time they are submitted to the Conference of the Parties] [at any time, after the Conference of the Parties has considered the report from the body in charge of implementation].]

[8. The manner in which reports would be prepared and their content, should [, subject to Annex II,] be determined by the individual Party.]

11/ It has been proposed that Annex II have the following introduction: "Nothing in this annex shall be interpreted as requiring Parties to disclose information relating to national defense."

One delegation requested that while certain essential information in the reports would be obligatory, some flexibility should be given with regard to other information.

ARTICLE 15

[RESOLUTION OF QUESTIONS REGARDING INTERPRETATION AND IMPLEMENTATION OF THE CONVENTION

Process

[1. Questions relating to the [interpetation or] implementation of the Convention may be drawn to the attention of the Conference of the Parties by Parties [and by any subsidiary body established by or under the Convention]. Any Party concerned about another Party's implementation of its obligations under the Convention or about its own capacity to implement fully those obligations may notify its concern, through the secretariat, to the Conference of Parties. The Conference of Parties shall, in a timely fashion, consider any such question and promote its resolution. To that end it may, if it so decides, establish an [ad hoc] Panel of ... of its members] [or] [refer the issue to the Implementation Committee].]

Possible alternative paragraph 1

[1. Any Party concerned about another Party's [interpretation or] implementation of its obligations under the Convention or about its own capacity to implement fully those obligations may notify its concern, through the secretariat, to the Implementation Committee.]

2. The [ad hoc] Panel [Implementation Committee], when the Conference of the Parties decides to refer a question to it, shall, in considering the question before the next ordinary meeting of the Conference of the Parties:

(a) Invite the Party which has brought the question to the attention of the Conference of the Parties [Implementation Committee] and any other Party whose [interpretation or] implementation of the Convention is in question to attend meetings of the Panel [Implementation Committee] and take part in consultations with it;

(b) Provide the Party whose [interpretation or] implementation of the Convention is in question a full opportunity to inform the Panel [Implementation Committee] of its capacity to implement its obligations under the Convention and of its needs relevant to that issue;

(c) Consult, as it deems necessary, any subsidiary body established by or under the Convention and other expert bodies;

(d) Promote, as necessary, the enhancement of the capacity of the Party whose [interpretation or] implementation of the Convention is in question to implement fully its obligations under the Convention; and

(e) Report the results of its consultations, together with any recommendations, to the next ordinary meeting of the Conference of the Parties.

Consideration of Report

3. After considering the report of the [ad hoc] Panel [Implementation Committee], the Conference of the Parties may decide to adopt a recommendation or recommendations to promote the full implementation of the Convention and to further its objectives.

Voting

4. The Conference of the Parties shall make every effort to take decisions under this Article by consensus. If all efforts at consensus have been exhausted decisions shall, as a last resort, be taken by a two-thirds majority vote of the Parties present and voting.

Additional Rules

5. The Conference of the Parties may in elaboration of the provisions of paragraph 2 of this Article, lay down additional rules relating to membership of [ad hoc] Panels, their meetings and procedures.

Relationship to Dispute Settlement (Article 16)

Option 1

6. If, after the expiry of ... months following the initial submission of any questions to the secretariat pursuant to paragraph 1 of this Article, any Party continues to have a concern relating to the [interpretation or] implementation by another Party of its obligations under the Convention, it shall be entitled to invoke the dispute settlement procedures, established by Article [16] (Settlement of Disputes) of the Convention.

Option 2

6. The provisions of this Article are without prejudice to the operation of Article [16] (Settlement of Disputes) of the Convention.]

ARTICLE 16

[SETTLEMENT OF DISPUTES

Negotiation and other peaceful means

1. In the event of a dispute between any two or more Parties concerning the interpretation or application of this Convention, the Parties concerned shall, at the request of any one of them, seek a settlement of the dispute through negotiation or any other peaceful means of their own choice.

Choice of dispute settlement procedure

2. When ratifying, accepting, approving or acceding to this Convention, or at any time thereafter, a Party which is not a regional economic integration organization may declare in a written instrument submitted to the Depositary, that, in respect of any dispute concerning the interpretation in application of this Convention, it recognizes as compulsory ipso facto and without special agreement, in relation to any Party accepting the same obligation:

(a) Submission of the dispute to the International Court of Justice, and/or

(b) Arbitration in accordance with the procedure set out in Annex III.

A Party which is a regional economic integration organization may make a declaration with like effect in relation to arbitration in accordance with the procedure set out in Annex III.

3. A declaration made under paragraph 2 above shall remain in force until it expires in accordance with its terms or until three months after written notice of its revocation has been deposited with the Depositary.

4. A new declaration, a notice of revocation or the expiry of a declaration shall not in any way affect proceedings pending before the International Court of Justice or the Arbitral Tribunal, unless the Parties to the dispute otherwise agree.

Additional provisions

Option 1

5. Subject to the operation of paragraph 2 above, if, after the expiry of twelve months following a request made under paragraph 1 above, the Parties concerned have not been able to settle their dispute through the means mentioned in that paragraph, the dispute shall be submitted, at the request of any of the Parties to it, to conciliation.

6. A conciliation commission shall be created upon the request of one of the Parties to the dispute. The commission shall be composed of an equal number of members appointed by each Party concerned and a chairman chosen jointly by the members appointed by each Party. The commission shall render a [final and] recommendatory award, which the Parties shall consider in good faith.

Option 2

5. A Party that has not made a declaration under paragraph 2 above or in respect of which a declaration is no longer in force shall be deemed to have accepted the competence of the Arbitral Tribunal.

6. If the Parties to any dispute have accepted the same means for the settlement of a dispute, the dispute may be submitted only to that procedure, unless the Parties otherwise agree. If, however, the Parties have not accepted the same means for the settlement of the dispute, or if they have accepted both means, the dispute may be submitted only to the Arbitral Tribunal, unless the Parties otherwise agree.

7. If, after the expiry of twelve months following a request made under paragraph 1 above, the Parties concerned have not been able to settle their dispute through the means mentioned in that paragraph, the dispute shall be submitted, at the request of any of the Parties to the dispute, for settlement in accordance with the procedure determined by the operation of paragraphs 5 and 6 above.

Related Legal Instruments

7./8. The provisions of this Article shall apply to any related legal instrument which the Conference of Parties may adopt, unless the instrument provides otherwise.]

ARTICLE 17

AMENDMENTS TO THE CONVENTION

Proposals

1. Any Party may propose amendments to this Convention.

Adoption of Amendments

2. Amendments to this Convention shall be adopted at [an ordinary] [or extraordinary] meeting of the Conference of the Parties. The text of any proposed amendment to this Convention shall be communicated to the Parties by the secretariat at least six months before the meeting at which it is proposed for adoption. The secretariat shall also communicate proposed amendments to the Signatories to the Convention for information.

3. The Parties to the Convention shall make every effort to reach agreement on any proposed amendment to the Convention by consensus. If all efforts at consensus have been exhausted, and no agreement reached, the amendment shall be adopted by a [two-thirds] [three-quarters] majority vote of such Parties present and voting at the meeting [whose [net] emissions of [greenhouse gases] [carbon dioxide] represent at least [xx per cent] [50 per cent] [75 per cent] [80 per cent] of estimated global [net] [carbon dioxide] [greenhouse gases] [emissions in the preceding [five] year[s]]. The amendment shall be submitted by the Depositary to all Parties for their ratification, acceptance or approval.

Voting

4. For the purposes of this Article, "Parties present and voting" means Parties present and casting an affirmative or negative vote.

Entry into Force of Amendments

5. Instruments of ratification, acceptance or approval of amendments shall be deposited with the Depositary. Amendments adopted in accordance with paragraph 3 above, for those States having accepted the amendment, shall [, unless otherwise provided in the amending instrument itself,] enter into force on the ninetieth day after the date of receipt by the Depositary of notification of their ratification, acceptance or approval, by at least [two-thirds] [three-quarters] of the Parties to this Convention [and whose [net] emissions of greenhouse gases represent at least 80 per cent of [net] global emissions in the preceding year].

6. The amendments shall enter into force for any other Party on the ninetieth day after the date on which that Party deposits with the Depositary its instrument of ratification, acceptance or approval of the amendments.

ARTICLE 18

[PROTOCOLS

Adoption

1. The Conference of the Parties may at any [ordinary] [or extraordinary] meeting adopt Protocols to this Convention [that are aimed at implementing the [comprehensive] purposes and principles established in the Convention, specifying [comprehensive] measures or obligations relating to [certain] [all] aspects of climate change]. [The Protocols shall be in conformity with the provisions of the Convention.]

Notification to the Parties

2. The text of any proposed Protocol shall be communicated to the Parties by the secretariat at least six months before such a meeting.

Entry into Force

[3. The requirements for the entry into force of any Protocol shall be established by that instrument [and may include provisions regarding [accelerated] [differentiated] procedures for entry into force].]

Parties to a Protocol

4. Only Parties to the Convention may be Parties to a Protocol.

5. Decisions under any Protocol shall be taken only by the Parties to the Protocol concerned.]

ARTICLE 19

ADOPTION AND AMENDMENT OF ANNEXES TO THE CONVENTION

Annexes as integral to the Convention

1. The Annexes to this Convention shall form an integral part of this Convention and, unless expressly provided otherwise, a reference to this Convention constitutes at the same time a reference to any Annexes thereto. [Such Annexes shall be restricted to [procedural, scientific, technical and administrative matters] [technical lists or forms of a scientific or technical character] [lists, forms and any other material of a descriptive nature only].]

Adoption of Additional Annexes to the Convention

2. [Additional] Annexes to the Convention shall be proposed and adopted according to the procedure set forth in Article [VII.3.] (Amendments to the Convention). [Such Annexes shall be restricted to [procedural, scientific, technical and administrative matters] [technical lists or forms of a scientific or technical character] [lists, forms and any other material of a descriptive nature only].]

Procedure for Entry into Force of Additional Annexes to the Convention

3. Annexes that have been adopted in accordance with paragraph 2 above shall enter into force for all Parties to the Convention six months after the date on which the Depositary issues notices to such Parties of the adoption of the Annex, except for those Parties that have notified the Depositary, in writing, within that period of their non-acceptance of the Annex. The Annex shall enter into force for Parties which withdraw their notification of non-acceptance on the ninetieth day after the date of withdrawal of such notification has been received by the Depositary.

Procedure for Amendments to Annexes

4. The proposal, adoption and entry into force of amendments to Annexes to the Convention shall be subject to the same procedure as that for the proposal, adoption and entry into force of Annexes to the Convention.

5. If an additional Annex or an amendment to an Annex involves an amendment to the Convention, the additional Annex or amended Annex shall not enter into force until such time as the amendment to this Convention enters into force.

ARTICLE 20

RIGHT TO VOTE

1. Each Party to the Convention shall have one vote, except as provided for in paragraph 2 below.

2. Regional economic integration organizations, in matters within their competence, shall exercise their right to vote with a number of votes equal to the number of their member States that are Parties to the Convention [and which are present at the time the vote is taken]. Such an organization shall not exercise its right to vote if any of its member States exercises its right, and vice versa.

ARTICLE 21

DEPOSITARY

The Secretary-General of the United Nations shall be the Depositary of this Convention.

ARTICLE 22

SIGNATURE

This Convention shall be open for signature by States [Members of the United Nations or members of the Specialized Agencies of the United Nations] and by regional economic integration organizations at [ ] from [ ] to [ ], and at the United Nations Headquarters in New York from [ ] to [ ].

ARTICLE 23

RATIFICATION, ACCEPTANCE, APPROVAL OR ACCESSION

1. The Convention shall be subject to ratification, acceptance, approval or accession by States and by regional economic integration organizations. It shall be open for accession from the day after the date on which the Convention is closed for signature. Instruments of ratification, acceptance, approval or accession shall be deposited with the Depositary.

Regional Economic Integration Organizations

2. Any regional economic integration organization which becomes a Party to this Convention without any of its member States being a Party shall be bound by all the obligations under the Convention. In the case of such organizations, one or more of whose member States is a Party to the Convention, the organization and its member States shall decide on their respective responsibilities for the performance of their obligations under the Convention. In such cases, the organization and the member States shall not be entitled to exercise rights under the Convention concurrently.

Declarations of Competence

3. In their instruments of ratification, acceptance, approval or accession, regional economic integration organizations shall declare the extent of their competence with respect to the matters governed by the Convention. These organizations shall also inform the Depositary, who shall in turn inform the Parties, of any substantial modification in the extent of their competence.

ARTICLE 24

ENTRY INTO FORCE

Entry into Force of the Convention:

1. This Convention shall enter into force on:

(Four options)

- Option 1:

The ninetieth day after the date of deposit of the [twentieth] [twenty-fifth] [fortieth] [fiftieth] [sixtieth] [eightieth] instrument of ratification, acceptance, approval or accession.

- Option 2:

The ninetieth day after the date of deposit of the instrument of ratification, acceptance, approval or accession from States or regional economic integration organizations whose [net] emissions of greenhouse gases [carbon dioxide] represent [fifty per cent] [two thirds] [three quarters] of estimated total global net emissions in [year].

- Option 3:

The ninetieth day after the date of deposit of the [twentieth] [twenty-fifth] [fortieth] [fiftieth] [sixtieth] [eightieth] instrument of ratification, acceptance, approval or accession by, and of ratification, acceptance, approval or accession by States or regional economic integration organizations whose [net] emissions of greenhouse gases [carbon dioxide] represent [one half] [two thirds] [three quarters] of estimated total global net emissions in [year].

- Option 4:

The ninetieth day after the date of deposit of the [twentieth] [twenty-fifth] [fortieth] [fiftieth] [sixtieth] [eightieth] instrument of ratification, acceptance, approval or accession, or the ninetieth day after the date of deposit of the instrument of ratification, acceptance, approval or accession from States or regional economic integration organizations whose [net] emissions of greenhouse gases [carbon dioxide] represent [two thirds] [three quarters] of estimated total global net emissions in [year], whichever is the earlier.

Entry into Force for Parties Once Convention Already in Force

2. For each State or regional economic integration organization that ratifies, accepts or approves this Convention or accedes thereto after the deposit of the [twentieth] [twenty-fifth] [fortieth] [fiftieth] [sixtieth] [eightieth] instrument of ratification, acceptance, approval or accession, [in accordance with paragraph 1] it shall enter into force on the ninetieth day after the date of deposit by such State or regional economic integration organization of its instrument of ratification, acceptance, approval or accession.

Regional Economic Integration Organizations

3. For the purposes of paragraphs 1 and 2 above, any instrument deposited by a regional economic integration organization shall not be counted as additional to those deposited by member States of the organization.

ARTICLE 25

RESERVATIONS AND DECLARATIONS

1. [No] reservations may be made to this Convention.

Parties Not Precluded from Making Declarations

[2. Paragraph 1 above shall not, however, preclude a State or regional economic integration organization, when signing, ratifying, accepting, approving or acceding to this Convention, from making declarations or statements, provided that such declarations or statements do not purport to exclude or to modify the effects of the provisions of the Convention in their application to that State or regional economic integration organization.]

ARTICLE 26

WITHDRAWAL

Written Notification of Withdrawal from Convention

1. At any time after [three] [five] years from the date on which this Convention has entered into force for a Party, that Party may withdraw from the Convention by giving written notification to the Depositary.

Effective Date of Withdrawal

2. Any such withdrawal shall take effect upon expiry of [six months] [one year] from the date of its receipt by the Depositary, or on such later date as may be specified in the notification of the withdrawal.

Withdrawal from Convention Considered as Withdrawal from Protocol

3. Any Party that withdraws from this Convention shall be considered as also having withdrawn from any protocol to which it is a Party.

ARTICLE 27

AUTHENTIC TEXTS

The original of this Convention, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

IN WITNESS WHEREOF the undersigned, being duly authorized to that effect, have signed this Convention.

Done at _____ this _____ day of _____ 19__.

[ANNEXES]

[ANNEX I

[RESEARCH [TECHNOLOGICAL] [[AND] DEVELOPMENT] AND SYSTEMATIC OBSERVATION] [TECHNOLOGICAL AND SCIENTIFIC RESEARCH AND SYSTEMATIC OBSERVATION]] 12/

[1. The Parties recognize that [the] major [scientific] [issues] [uncertainties] [[in the] state of knowledge] related to climate change [, and its relation to development,] are:]

[Possible alternative chapeau

The following areas are suggested for the purposes of Article [5], in the promotion of and cooperation in research, technological development and systematic observation relevant to climate change:]

(a) Understanding the interactions between changes in the climate system and the physical, chemical, biological, hydrological and geological processes and solar cycles in the atmosphere, oceans and land;

[(b) Documentation of the contemporary and historic changes in the Earth's climate through long-term systematic observations of the Earth's atmosphere, oceans, terrestrial and socio-economic systems;]

[(c) Developing models of the Earth's climate system and prediction of the magnitude and rate of future climate change in the global, regional and national scales, due to both natural processes and human activities;]

(d) Understanding the impacts of climate change [and the response to it] on ecosystems and social and economic systems; and

(e) Evaluating the methodologies for assessing options for mitigating and adapting to climate change, including consideration of [socio-economic] costs and benefits of such options [including opportunity costs of foregoing options].

[[2. [The Parties recognize the need to cooperate] [Indicative list of areas where cooperation] in conducting research [and development] and systematic observation [is needed], in accordance with Article [5] [, in such areas as]:]

12/ Same text as in A/AC.237/15, Annex II (Consolidated Working Document, Annex I).

(a) Systematic Observations. Long-term systematic observations of the Earth's atmosphere, oceans, seas, terrestrial and socio-economic systems on global and regional scales, including documenting the contemporary and historical changes in the Earth's environment using an integrated space, land and ocean based [global climate] observing system and relevant paleoenvironmental data. [Full use of existing weather and climate observing systems should be ensured.] Specifically there is a need for systematic observations to measure and/or estimate:

(i) atmospheric parameters, including,

- greenhouse gases, aerosols and their possible precursors;
- clouds, by type, amount, height, composition and optical properties;
- precipitation, evaporation and water vapour, temperature, wind and radiative fields.

(ii) oceanic parameters, including,

- ocean fluxes, particularly of heat and of greenhouse gases, aerosols, and their possible precursors between the ocean surface and atmosphere;
- sealevel, temperature, roughness, circulation, ice cover, chemical composition, biological activity and colour.

[(iii) coastal zone parameters, including,

- sealevel, temperature and other relevant meteorological and oceanographic parameters;
- parameters defining state and viability of coastal ecosystems, including coral and planktonic populations;
- parameters defining the quality and viability of human settlements.]

(iv) terrestrial parameters, including,

- fluxes of heat and of greenhouse gases, aerosols, and their possible precursors between ecosystems and the atmosphere;
- extent, state and productivity of managed and unmanaged ecosystems;
- physical surface characteristics, such as temperature, albedo, roughness, soil parameters, snow, ice, permafrost, glaciers, lake levels, and river discharge; and

- geodynamic, seismic and volcanic processes and their consequences.

(v) socio-economic parameters, including,

- [consumption patterns;]
- population dynamics;
- urban development;
- rural population;
- type, extent and variability of land use practices;
- economic variables including reserves of natural resources, incremental costs, debt problems, [commodity prices] and terms of trade;
- geographic characteristics of countries;
- technology and practices in energy, forestry, agriculture, transport, hydrology, and industry;
- human health.

(b) Process research. Research of the coupled physical, chemical, biological, [hydrological, geological,] economic and social processes that affect the Earth's climate system. There is a need for an improved understanding of the processes [and development of methodologies] governing:

(i) the sources and sinks of greenhouse gases, aerosols, and their possible precursors, which affect future atmospheric concentrations and the Earth's radiative balance, and how these may be influenced by climate change. Specifically:

- identification, quantification and development of an understanding of the processes that control oceanic, terrestrial, and atmospheric sources, sinks and reservoirs of anthropogenic and natural origin;
- quantitative estimation of radiative properties and lifetimes;
- improved indices that reflect the radiative forcing of greenhouse gases [, taking into account historical emissions];
- development and improvement of methodologies for national inventories of sources, sinks and reservoirs.

(ii) atmospheric cycling of [radiation,] heat and water, with emphasis on cloud formation, dissipation and radiative properties, which influence the response of the atmosphere to greenhouse forcing. Specifically, research on:

- the atmospheric distribution of water vapour, precipitation, and clouds;
- evaluating the radiative properties of clouds;
- evaluating the temporal variability of solar radiative input and atmospheric transmission;
- the evaluation and mapping of surface albedo.

(iii) oceans, which influence the patterns and rate of climate change. Specifically, studies to establish the mechanisms governing:

- ocean dynamics;
- the transport of heat and chemicals;
- exchanges of energy and chemicals with the atmosphere;
- interactions between the ocean and land;
- the role of biological processes in the cycling of carbon and sulphur and their response to anthropogenic activities;
- sealevel changes.

(iv) the role of terrestrial systems in hydrological and ecological processes, which affect regional climate change and water availability. Specifically, studies of the role of terrestrial geophysical and biological, hydrological processes in the cycling of energy, water and nutrients on land and exchange with the atmosphere, [the sealevel rise and rivers of fresh water] and their response to environmental changes.

(v) the cryosphere, particularly in polar regions, which affects global sealevel changes and regional climate change. Specifically, studies of:

- the mass balance of polar ice sheets and glaciers and their response to climate change;
- the role of sea ice in the atmosphere-ocean exchange of energy;

- the processes controlling snow accumulation, redistribution, and seasonal melting;

- the dynamics of permafrost systems.

[(vi) the biosphere and the oceans, including those of the Antarctica and the Arctic regions, as reservoirs or sinks, as well as ways and means of preserving and enhancing sinks and reservoirs and creating new ones.]

(vii) [economic and social] [development] processes, which contribute and react to climate change. Specifically, studies of how the climate system [influences and] is influenced by:

- [natural resource endowment;]

- economic growth, policies and practices;

- technology and practices in a wide range of sectors including energy, agriculture, forestry, transportation and industry; and

- social systems, policies and practices.

(c) Modelling and prediction. Prediction of the magnitude and rate of future climate change, including an identification and assessment of uncertainties, through the development and validation of integrated climate system models with enhanced [local and] regional [and national] resolution, social and economic models, and the links and feedbacks between climate change and social and economic processes [and development paths]. At a global [, and] regional [and national] scale, there is a need for [broadened and improved efforts related to]:

(i) [improved] representation within models of processes affecting climate;

(ii) evaluation of the predictability of climate;

(iii) comparison of model output with current observation, past records and transient climate parameters;

(iv) development of fully coupled climate models, which integrate the effects of changing atmospheric radiative properties with changes in physical, chemical, [and] biological [, hydrological, geological] processes [in solar cycles] and between the atmosphere, oceans and land, linked to social and economic models, and

(v) simulation of climate change based on different emission scenarios.

(d) Impact research. Research to [evaluate and to] develop methodologies for evaluating the local and regional [and national] impacts of climate change, and identifying the environmental, economic and social consequences. There is a need for an improved understanding of the impact of climate change on:

(i) natural terrestrial, aquatic and coastal ecosystems and resources. As a function of rate and magnitude of climate change, determining the sensitivity of:

- ecosystems (e.g., productivity, extent) to changes in temperature, hydrological system (e.g., groundwater, precipitation, soil moisture), atmospheric composition, and sealevel;

- changes in stability and composition in ecosystems; and

- the biological diversity of marine life [in the oceans] including shifts in marine organisms.

(ii) agriculture, forestry and fisheries. Conducting regional studies of the impacts of climate change on:

- potential productivity of crops;

- the vulnerability of major crops and their varieties;

- the abundance and distribution of fisheries;

- socio-economics of changed transport, storage processing and marketing conditions.

(iii) water resources. Examining, on a regional basis, effects of changes in the hydrological cycle on:

- provision of drinking, irrigation and industrial water supplies;

- impact on agriculture [and]

[- inland navigation;]

- combined effects of climate change and land use changes on water resources;

- drought and desertification.

(iv) coastal environment

- sealevel and temperature[s] [changes], and their subsequent regional impacts on geological and ecological processes, including coral and planktonic populations;

- the viability and quality of human settlements; and

- frequency and magnitude of marine disasters such as severe storms and storm surges and their impact on coastal structures.

(v) social systems and economics. Investigating the effects of changes in climate, weather, [and] sealevel [and temperature] on:

- disease vectors, viability of pathogens, nutrition and other factors relevant to human health;

- the viability and quality of land use, human settlements, the built environment and all other aspects contributing to the quality of life;

- the economic, social and cultural consequences for societies, especially for [vulnerable small island countries] [those particularly vulnerable].

(e) Research to develop [response measures, including development of technology for the] [methodologies on the] mitigation of, and adaptation to, climate change, including for:

(i) examining options for reducing sources and/or increasing sinks of greenhouse gases and their potential precursors

- from energy, industrial, commercial, domestic and transport sources through studies of:

  . technology options for low emission, high efficiency and alternative technologies, including biotechnology, biomass, wind and solar energy, and technologies for greenhouse gas fixation;

  . applicability, cost and social factors affecting use of conventional and newly developed technology options;

- from forestry and agriculture through studies of:

  . methods for reducing emissions and/or increasing sinks;

  . applicability, cost and social factors affecting use of lower emission or enhanced sink practices;

- from oceans through studies of methods, costs and consequences of increasing oceanic uptake;

- by utilizing economic and other policy instruments; and

- through education and public information techniques.

(ii) examining options for adapting to a changing climate of:

- natural terrestrial, aquatic and coastal ecosystems and resources;

- agriculture, forestry and fisheries;

- water resources;

- coastal environment; and

- social systems and economics.

(iii) Assessing the costs, benefits, and environmental and social consequences of mitigation and adaptation responses, including:

- as a function of the timing and magnitude of climate change;

- the direct and indirect links between responses and economic activity, [including eradication of poverty and trade]; and

- the distributional and other social implications of responses within and between countries and regions; and

- countries which are not in a position to use substitutes for fossil fuels or do not possess the flexibility to switch to non-fossil fuels.

(iv) Environmentally safe and sound technologies, practices and measures.]

[3. The Parties recognize the need to support existing international or intergovernmental programmes or organizations aiming at defining, conducting, assessing and/or financing research, development and systematic observation as described in paragraphs 1 and 2 of this Annex. In particular, the Parties acknowledge the following programmes and their subsidiary programmes, and organizations:

- Intergovernmental Panel on Climate Change (IPCC)

- World Climate Programme (WCP)

- International Geosphere-Biosphere Programme (IGBP).]]

[POSSIBLE ALTERNATIVE TEXT FOR ANNEX I

1. The Parties recognize that the major scientific issues related to climate change are:

(a) Understanding the interactions between changes in the climate system and the physical, chemical, biological, and geological processes in the atmosphere, oceans and land;

(b) Understanding the impacts of climate change on ecosystems and social and economic systems;

(c) Evaluating the methodologies for mitigating and adapting to climate change, including consideration of costs and benefits of such options.

To resolve these problems, the active participation of all countries is required.

2. The Parties recognize, in accordance with Article 5 (Research [and Development] and Systematic Observation), the need to cooperate in the establishment of a global climatic observation system in using and developing existing networks of measurement, transmission, processing and data storage. In particular, it is necessary to undertake systematic observations in order to measure directly or indirectly:

(a) Atmospheric parameters, including,

(i) greenhouse gases, aerosols and their possible precursors;

(ii) clouds, by type, amount, height, composition and optical properties;

(iii) precipitation, humidity, evaporation and water vapour, temperature, wind and radiative fields.

(b) Oceanic parameters, including,

(i) ocean fluxes, particularly of heat and of greenhouse gases, aerosols, and their possible precursors between the ocean surface and atmosphere;

(ii) sealevel, temperature, roughness, circulation, ice cover, chemical composition, biological activity and colour.

(c) Terrestrial parameters,

(i) fluxes of heat and of greenhouse gases, aerosols, and their possible precursors between ecosystems and the atmosphere;

(ii) extent, state and productivity of managed and unmanaged ecosystems;

(iii) physical characteristics, such as temperature, albedo, roughness, soil parameters, snow, ice, permafrost, glaciers, lakes and rivers.

(d) Socio-economic parameters, including,

(i) population dynamics;

(ii) urban development;

(iii) type, extent and variability of land use practices;

(iv) economic variables including reserves of natural resources, and geographic characteristics of countries;

(v) technology and practices in energy, forestry, agriculture, transport, hydrology, and industry;

(vi) human health.

3. The Parties, in accordance with Article 5 (Research [and Development] and Systematic Observation), recognize the need to cooperate in conducting research and development in such areas as:

(a) Process research. Research of the coupled physical, chemical, biological, geological, economic and social processes that affect the Earth's climate system. There is a need for an improved understanding of the processes and development of methodologies governing:

(i) the sources and sinks of greenhouse gases, aerosols, and their precursors, which affect atmospheric concentrations and the possible impact of a climate change;

(ii) atmospheric cycling of radiation, heat and water, with emphasis on cloud formation, dissipation and radiative properties, which influence the response of the atmosphere to greenhouse forcing;

(iii) oceans, which influence geographical distributions and the rate (pace) of the climate change;

(iv) the role of terrestrial systems in hydrological and ecological processes, which affect regional climate change and water availability;

(v) the cryosphere, particularly in polar regions, which affects global sealevel changes and regional climate change; and

(vi) economic and social processes, which contribute and react to climate change.

(b) Modelling and prediction. Prediction of the magnitude and rate of future climate change, including an assessment of uncertainties, through the development and validation of integrated climate system models with enhanced regional and national resolution, social and economic models, and the links and feedbacks between climate change and social and economic processes. At a global, regional and national scale, there is a need for:

(i) improved representation within models of processes affecting climate;

(ii) evaluation of the predictability of climate;

(iii) comparison of model output with current observation;

(iv) development of fully coupled climate models.

(c) Impacts. Evaluation of the local and regional impacts of climate change, and identifying the environmental, economic and social consequences. There is a need for an improved understanding of the impact of climate change on the following activities and fields:

(i) natural terrestrial, aquatic and coastal ecosystems and resources;

(ii) agriculture, forestry and fisheries;

(iii) water resources;

(iv) coastal environment;

(v) social systems and economics.

(d) Development of methods for mitigation and adaptation to climate change. In particular:

(i) examining options for reducing sources and/increasing sinks of greenhouse gases aerosols and their precursors;

(ii) examining options for adapting to climate changes;

(iii) development of technologies which are safe, rational and ecologically sound;

(iv) assessing the costs, benefits, and environmental and social consequences of mitigation and adaptation responses.

4. The Parties recognize the particular needs of the developing countries in the following areas:

(a) Observation and data analysis:

(i) it is necessary to help them to increase their capacity to observations and data analysis;

(ii) undertake systematic observations mentioned in subparagraphs (a) to (d) of paragraph 2;

(iii) exchange observations with other countries, especially on a regional basis;

(iv) process, locally and at a regional level, data in view to using it for their economic development and studying responses to mitigate and adapt themselves to climate change.

(b) Research and technological innovations:

The aim is simultaneously to, inter alia, promote sustainable development, reduce greenhouse gases emissions, increase the sinks and improve adaptive possibilities to climate changes. This concerns, in particular, the following sectors:

(i) agriculture (reduction of soil carbon emissions, adaptation to drought, limitation of desertification, etc.);

(ii) energy (promotion of bioenergy and other renewable energies, energy conservation etc.);

(iii) forestry (reduction of pressure for deforestation, promotion of forestry for food, stabilisation of agriculture); and

(iv) coastal zones and fisheries.

To meet these objectives, developing countries should be able to increase the means spent for:

- training and research;

- technological innovations and research, in cooperation with industrialized or developing countries.]

[ANNEX II]

[REPORTING

1. Reports submitted pursuant to Article [14] (Reporting) [shall] [may] contain [, inter alia,] the following information:

[Each least developed country agrees to submit a national report including information on at least items (a) and (b) of paragraph 1.]

(a) Description of relevant national circumstances relating to climate change and, for developing countries, any particular difficulties faced by them;

(b) National inventories of sources and sinks of all greenhouse gases not controlled by the Montreal Protocol, using comparable methodologies agreed upon by the Conference of the Parties;

(c) Option 1 13/

[The measures it is taking to implement this Convention, including the fulfilment of any general or specific commitments, with respect to, inter alia; national [strategies and] programmes; mitigating and adapting to climate change; research and systematic observation; exchange of information; public awareness; financial resources and cooperation and related technology transfer;]

Option 2

[For developed country Parties,] [and developing country Parties] [measures] [national strategies] [policies] to mitigate and adapt to climate change [including a description of specific actions being taken or to be taken, with respect to each gas in each sector selected for action by the Party];

[Measures taken in fulfilment of the [obligations] [specific commitments] under the Convention, [with particular attention to [reductions of emissions, transfer of financial resources and technology] [energy efficiency and conservation, new [and renewable] energy sources,] [mitigating the adverse consequences of climate change] [protection and enhancement of] sinks, [land use and management,] coastal zone management, transportation and industrial processes [and agriculture];]

13/ This option would replace paragraphs (g), (i), (l) and (m).

[(d) Current projections for annual levels of sources and sinks of greenhouse gases and expected changes and trends taking into account measures and policies described under (c);]

[(e) Expected changes and trends in [net] emissions of [main] greenhouse gases [and sinks] [including estimates of the [net] effects of its actions on national [net] greenhouse gas emissions] [and sinks] [with particular reference to the achievement of any target established in the Convention];]

[(f) Parties undertaking specific commitments may include estimates of the costs of specific measures to meet commitments under the Convention, guided by a methodological framework they have agreed upon;]

[(g) Contributions to the financial and technology transfer mechanism;]

[(h) For developing country Parties, [projects for] [requirements of] transfer of technology and financial resources to mitigate and adapt to climate change, as well as estimated gross and incremental costs [of these projects] [to fulfil these requirements;]

(i) Option 1

[Effective measures in fulfilment of obligations and specific commitments relative to the provision of adequate, new and additional financial resources, and access to and transfer of environmentally sound technology on a preferential and non-commercial basis contributions to the financial mechanism of the Convention and description of programmes for technological cooperation;]

Option 2

[Effective measures in fulfilment of obligations and specific commitments relative to the provision of financial resources and cooperation on transfer of technology;]

[(j) Description of methodologies used in making its estimates in areas where there is no methodology agreed under the present Convention;]

[(k) Efforts [, as appropriate,] to coordinate and harmonize measures to avoid trade distortions;]

[(l) Relevant national research [and development] and systematic observation programmes and participation in international programmes;]

[(m) National [programmes] [measures] and international cooperation with regard to education, training and public awareness [and technology transfer];]

[(n) Efforts to implement [obligations] [specific commitments] jointly with another Party or Parties;] and

(o) Such other actions as are relevant to the achievement of the objective of the Convention.

2. Further, reports may, on a voluntary basis, identify proposed projects in need of investment including specific technologies, materials, equipment, techniques or practices that would be needed to implement such projects and an estimate of the costs and net greenhouse gas emission reduction associated therewith.

3. [A Party may designate [the following] [any] type[s] of information contained in its report as confidential[.][:]]

[Possible alternative chapeau

[A Party and the Advisory Committee on Implementation may agree that certain information contained in the report of that Party is confidential. Categories of confidential information include:]

[(a) Information that is directly related to the national defence [and security] of that Party;]

[(b) Information that is of a proprietary commercial nature;]

(c) Information the release of which would result [directly] in [significant] economic or commercial dislocation for that Party; or

[(d) Such other information as [the Party believes is confidential] [agreed upon] [thought necessary by the Party] [by the Party and the Advisory Committee on Implementation].]]]

[ANNEX III]

[ARBITRATION 14/

Article 1

Unless the Parties to a dispute otherwise agree, the arbitration referred to in Article [16] (Settlement of Disputes) of the Convention shall be conducted in accordance with the procedure set out in Articles 2 to 17 below.

Article 2

The claimant Party shall notify the secretariat of the reference of a dispute to arbitration pursuant to Article [16] (Settlement of Disputes) of the Convention. The notification shall state the subject-matter of the arbitration and include, in particular, the articles of the Convention or the protocol, the interpretation or application of which is at issue. The secretariat shall forward the information thus received to all Parties to the Convention or to the protocol concerned.

Article 3

1. In disputes between two Parties, the Arbitral Tribunal shall consist of three members. Each of the Parties to the dispute shall appoint an arbitrator within two months of the notification referred to in Article 2 of this Annex and the two arbitrators so appointed shall designate by common agreement the third arbitrator who shall be the chairman of the Tribunal. The latter shall not be a national of one of the Parties to the dispute, nor have his or her usual place of residence in the territory of one of these Parties, nor be employed by any of them, nor have dealt with the case in any other capacity.

2. In disputes between more than two Parties, Parties in the same interest shall appoint one member of the Tribunal jointly by agreement.

3. Any vacancy shall be filled in the manner prescribed for the initial appointment.

Article 4

1. If the chairman of the Arbitral Tribunal has not been designated within two months of the appointment of the second arbitrator, the Secretary-General

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14/ Same text as in A/AC.237/15, Annex II (Consolidated Working Document, Annex IV).

of the United Nations shall, at the request of either Party, designate the chair within a further two months' period.

2. If one of the Parties to the dispute does not appoint an arbitrator within two months of receipt of the notification referred to in article 2 of this Annex the other Party may inform the Secretary-General of the United Nations, who shall designate the other arbitrator within a further two months' period.

Article 5

The Arbitral Tribunal shall render its decision in accordance with international law, as well as the provisions of this Convention and any protocols concerned.

Article 6

Unless the Parties to the dispute otherwise agree, the Arbitral Tribunal shall determine its own procedure, ensuring that each Party has a full opportunity to be heard and to present its case.

Article 7

The Parties to the dispute shall facilitate the work of the Arbitral Tribunal and, in particular, using all means at their disposal, shall:

(a) provide it with all relevant documents, facilities and information; and

(b) enable it when necessary to call witnesses or experts and receive their evidence.

Article 8

The Parties and the arbitrators are under an obligation to protect the confidentiality of any information they receive in confidence during the proceedings of the Arbitral Tribunal.

Article 9

Unless the Arbitral Tribunal determines otherwise because of the particular circumstances of the case, the costs of the Tribunal shall be borne by the Parties to the dispute in equal shares. The Tribunal shall keep a record of all the costs, and shall furnish a final statement thereof to the Parties.

Article 10

Any Party to the Convention or, as the case may be, to a protocol thereto, that has an interest of a legal nature in the subject-matter of the dispute that may be affected by the decision in the case, may intervene in the proceedings with the consent of the Tribunal.

Article 11

The Tribunal may hear and determine counterclaims arising directly out of the subject-matter of the dispute.

Article 12

Decisions both on procedure and substance of the Arbitral Tribunal shall be taken by a majority vote of its members.

Article 13

If one of the Parties to the dispute does not appear before the Arbitral Tribunal or fails to defend its case, the other Party may request the Tribunal to continue the proceedings and to render its final decision. Absence of a Party or failure of a Party to defend its case shall not constitute a bar to the proceedings. Before rendering its final decision, the Arbitral Tribunal must satisfy itself that the claim is well founded in fact and law.

Article 14

The Tribunal shall render its final decision within five months of the date on which it is fully constituted unless it finds it necessary to extend the time-limit for a period which shall not exceed a further five months.

Article 15

The final decision of the Arbitral Tribunal shall be confined to the subject matter of the dispute and shall state the reasons on which it is based. It shall contain the names of the members who have participated and the date of the final decision. Any members of the Tribunal may attach a separate or dissenting opinion to the final decision.

Article 16

The final decision shall be binding on the Parties to the dispute and without appeal unless the Parties to the dispute have agreed in advance to an appellate procedure. It shall be complied with by the Parties to the dispute.

Article 17

Any controversy that may arise between the Parties to the dispute as regards the interpretation or manner of implementation of the final decision may be submitted by either Party for decision to the Arbitral Tribunal which rendered it.]

[ANNEX IV]

[INSURANCE MECHANISM

1. The Parties recognize that:

(a) There should be established, as an integral part of the Convention, an International Climate Fund to finance measures to counter the adverse consequences of climate change, especially drought and desertification, and a separate International Insurance Pool (hereinafter referred to as "the Pool") to provide financial insurance against the consequences of sealevel rise;

(b) Revenue for the Pool should be drawn from mandatory sources, in particular developed country assessments;

(c) The financial resources of the Pool should be new, additional and adequate;

(d) The Pool should be under the control and direction of the Conference of the Parties; and

(e) The resources of the Pool should be used to compensate the most vulnerable small island and low-lying coastal developing countries for loss and damage resulting from sealevel rise.

2. The Parties further recognize that the formulation of a scheme for a Pool involves consideration of the following main questions:

- Methods of funding a Pool;

- Classification of the types of loss to be covered by the Pool;

- Criteria for establishing entitlement to claim against the Pool;

- Methods of evaluating loss resulting from sealevel rise; and

- Limitations on the amount of compensation payable by the Pool.

3. The Parties accordingly agree as follows:

(a) The financial burden of loss and damage suffered by the most vulnerable small island and low-lying developing countries (hereinafter referred to as "Group 1 countries") as a result of sealevel rise shall be distributed in an equitable manner amongst the industrialized developed countries (hereinafter referred to as "Group 2 countries") by means of a Pool;

(b) The Pool shall be funded by contributions levied on Group 2 countries;

(c) The administrating authority for the scheme (hereinafter referred to as "the Authority") shall be a body controlled on an equitable basis by the Group 1 and Group 2 countries within the framework of the Conference of the Parties;

(d) The contributions referred to in paragraph (b) shall be calculated according to a formula modelled on the 1963 Brussels Supplementary Convention on Third Party Liability in the Field of Nuclear Energy, as follows:

(i) as to 50 per cent, on the basis of the ratio between the gross national product at current prices of each Group 2 country and the total of the gross national products of all Group 2 countries in the year prior to the year in which the contribution was levied (hereinafter referred to as "the contribution year");

(ii) as to 50 per cent, on the basis of the ratio between the total emissions of carbon dioxide of each Group 2 country and the total carbon dioxide emissions of all Group 2 countries in the year prior to the contribution year;

(e) Ten years from the date on which the Convention enters into force the Group 2 countries shall contribute to the Pool an agreed percentage of the total of the gross national products of all Group 2 countries in the year prior to the contribution year, apportioned as in paragraph (d), provided that over the ten-year period the rate of global mean sealevel rise will have reached an agreed figure. If the rate of global mean sealevel rise has not reached the agreed figure by the end of the ten-year period, a review shall thereafter be carried out at five-yearly intervals and the obligation of the Group 2 countries to contribute to the Pool will not arise until the year following the review in which it is established to the satisfaction of the Authority that the rate of global mean sealevel rise has reached the agreed figure or that absolute global mean sealevel rise has reached an agreed figure;

(f) The insurance fund so constituted shall be invested by the Authority in interest bearing securities as determined by the Conference of the Parties;

(g) No right to claim against the Pool in respect of loss or damage in any area of a Group 1 country shall arise until:

(i) it shall have been established to the satisfaction of the Authority that the rate of global mean sealevel rise and the absolute level of global mean sealevel rise has reached agreed figures;

(ii) it shall have been established to the satisfaction of the Authority that the relative mean sealevel rise for any insured area in a Group 1 country has reached an agreed level above base levels determined for each area insured (such relative mean sealevel figures having been determined within ten years of the Convention coming into force); and

(iii) one year shall have elapsed from the date upon which the figures referred to in subparagraph (i) shall have been established as having been reached (that date plus one year being (hereinafter referred to as "the inception date")).

(h) In the first instance those areas of Group 1 countries which would be directly affected by sealevel rise to a level of an agreed number of centimetres above the base levels referred to in paragraph (g) (ii) shall be valued for insurance. Marketed assets shall be valued on the basis of gross domestic product for the insured area in question. Non-marketed interests shall be valued on the basis of formulae to be agreed;

(i) The insured values covered shall be negotiated between the Authority and the Government of each Group 1 country in accordance with valuation principles to be agreed. The same policy conditions shall be applicable to all Group 1 countries;

(j) All assets and interests intended to be insured under the scheme shall be listed by Group 1 countries for registration with the Authority. Records of assets and interests registered shall be kept up to date. Valuations of assets and interests registered for insurance shall be carried out in accordance with the agreed formulae and shall be assessed as soon as possible after the setting up of the Authority and in any event within ten years of the Convention coming into force. Revaluations shall be carried out periodically as appropriate;

(k) The first period of insurance shall commence on the inception date as defined in paragraph (g) (iii) and shall cover an agreed period following the inception date. Loss or damage occurring within the first and each following period of insurance, if accepted as a valid claim by the Authority, shall be paid out of the Pool as accumulated at the closing date of the period of insurance;

(l) If the funds in the Pool are insufficient to meet all valid claims, the claims shall be paid out on an equitable basis. If, after payment out of all valid claims in full, any surplus shall remain in the Pool, the surplus shall be carried over to the credit of the following insurance period;

(m) Prior to the closing date of the first period of insurance and of each subsequent period, the Conference of the Parties shall, after consultation with the Authority:

(i) Fix the length of the next period of insurance;

(ii) Estimate the probable extent of claims on the Pool during the next insurance period;

(iii) Determine the level of contributions to be levied on Group 2 countries sufficient to meet the estimated claims, after taking account of any surplus carried forward from the preceding period.

(n) Claims against the Pool in respect of insured assets and interests shall be dealt with by the Authority. The Authority shall investigate the cause of any claimed loss, prepare estimates, determine whether the claim comes within the terms of the insurance, evaluate the extent of loss and assess the amount of the claim recoverable by reference to the insured value of the asset or interest and any applicable limits;

(o) All assets in insured areas of Group 1 countries, whether commercially insured or not, shall in the first instance be valued for insurance, but no claims shall be accepted by the Pool in respect of property which at the time loss or damage occurs is insured commercially, whether by a private insurance company or otherwise;

(p) In assessing claims against the Pool, the Authority shall determine whether the loss or damage claimed could have been avoided or mitigated by measures which might reasonably have been taken at an earlier stage. In determining whether measures could or could not reasonably have been taken at an earlier stage, account shall be taken, amongst other things, of the availability of funds, both domestic and international, which would have enabled mitigating or preventative measures to have been taken, and the availability of commercial insurance on reasonable terms; and

(q) If differences of opinion arise between the Authority and the participating countries, every effort shall be made to negotiate a resolution, but if this is not achievable disputes shall be submitted to [an] [the] arbitration tribunal under [a special arbitration scheme] [the Convention].]

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INTERGOVERNMENTAL NEGOTIATING COMMITTEE
FOR A FRAMEWORK CONVENTION ON CLIMATE
CHANGE
Fifth session, second part
New York, 30 April-9 May 1992

REPORT OF THE INTERGOVERNMENTAL NEGOTIATING COMMITTEE FOR A FRAMEWORK CONVENTION ON CLIMATE CHANGE ON THE WORK OF THE SECOND PART OF ITS FIFTH SESSION, HELD AT NEW YORK FROM 30 APRIL TO 9 MAY 1992*

CONTENTS

		Paragraphs	Page
I.	INTRODUCTION	1 - 3	3
II.	ORGANIZATIONAL MATTERS	4 - 18	4
	A. Agenda	4 - 5	4
	B. Organization of negotiations	6 - 10	4
	C. Attendance	11 - 18	6
III.	COMPLETION OF A FRAMEWORK CONVENTION ON CLIMATE CHANGE	19 - 42	8
IV.	REVIEW OF EXTRABUDGETARY FUNDS	43 - 48	11

* The report of the first part of the fifth session of the Committee, which was held in New York from 18 to 28 February 1992, is contained in document A/AC.237/18 (Part 1). The text of the United Nations Framework Convention on Climate Change and Committee resolution INC/1992/1 (annexes I and II to the present report) have been issued under the symbol A/AC.237/18 (Part II)/Add.1 and Corr.1.

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CONTENTS (continued)

		Paragraphs	Page
V.	FUTURE WORK	49 - 50	12
VI.	ADOPTION OF THE REPORT	51 - 52	13

Annexes

I.	Text of the United Nations Framework Convention on Climate Change	(see Add.1)
II.	Resolution on interim arrrangements (INC/1992/1)	(see Add.1)
III.	List of documents before the Committee at the second part of its fifth session	16

University); Centre for Global Change (University of Maryland); Centre for Science and Environment; Climate Action Network; Climate Council; Cousteau Society; Edison Electric Institute; Environmental Defense Fund; Environmental Development Action in the Third World; Environmental and Energy Study Institute; Federation of Electric Power Companies, Japan; Fundacion Pro-Sierra Nevada de Santa Marta, Colombia; Global Climate Coalition; Global Coral Reef Alliance; Institute for International Economics; Institute for International Studies (Stanford University); International Council of Environmental Law; International Task Force (International NGOs and Social Movements Forum); National Association of Manufacturers; National Coal Association; National Rural Electric Cooperative Association; Rainforest Regeneration Institute; Royal Institute of International Affairs; School of Oceanography (University of Rhode Island); Stichting Natuur en Milieu; Stockholm Environment Institute; Tata Energy Research Institute; Union of Concerned Scientists; VERTIC; Woods Hole Research Center; Worldwatch Institute; World Wide Fund for Nature (WWF-International); World Wildlife Fund (WWF-USA).

18. The following other organization was represented by an observer: Pan-Africanist Congress of Azania.

III. COMPLETION OF A FRAMEWORK CONVENTION ON CLIMATE CHANGE

19. At its 7th plenary meeting, on 4 May, the Committee took stock of the progress made in negotiations since the beginning of the resumed session. The Chairman and Vice-Chairmen Djoghlaf and Estrada-Oyuela reported significant progress, although not all issues had been resolved. These would have to be finalized in the context of a global package.

20. The meeting concluded by hearing a statement from a representative of the World Wide Fund for Nature speaking on behalf of environment and development non-governmental organizations.

21. At its 8th plenary meeting, on 8 May, the Chairman introduced the draft convention contained in document A/AC.237/L.14 and its addenda, which had been prepared following consideration of document A/AC.237/CRP.1/Rev.1 and its addenda and informal consultations by the Chairman. He emphasized that these papers did not yet constitute an agreed text of a convention, but he expected that such agreement would eventually emerge. The papers had been the result of informal discussions conducted by him and Vice-Chairmen Djoghlaf and Estrada-Oyuela on three clusters of topics elaborated during earlier sessions of the Committee, by Vice-Chairman Estrada-Oyuela on legal and linguistic consistency, by Mr. Sadowski on definitions and by Ms. Dowdeswell on the topics set out in paragraph 10 (c) of this report. He invited delegations to judge the papers as a whole with a view to achieving a balanced package.

22. At the request of a group of delegations, it was agreed that the title of the Convention should read "United Nations Framework Convention on Climate Change."

23. Vice-Chairman Estrada-Oyuela reported on amendments proposed as a result of his consultations on legal and linguistic editing. Subject to further consideration of the texts the amendments were accepted for inclusion in the final text.

24. The 8th plenary meeting was adjourned for informal discussions.

25. At its 9th plenary meeting, on 9 May, which was preceded by informal discussions, the Committee considered document A/AC.237/L.14 and Add.1-10, which were available in all working languages, together with a draft resolution on interim arrangements proposed by the Chairman (A/AC.237/L.15). The Chairman referred to the delicacy of the negotiations which had resulted in a text reflecting a balance of interest. For this reason he invited the Committee to adopt the draft Convention as a package.

26. Following a discussion on the balance and acceptability of the package as a whole, a number of oral amendments to the text were accepted.

27. The Committee requested the secretariat, under the supervision of Vice-Chairman Estrada-Oyuela, to ensure, to the extent possible before the United Nations Conference on Environment and Development, the linguistic consistency of the texts of the Convention in its six languages, with a view if necessary to their rectification in accordance with the rules and procedures set forth in the Vienna Convention on the Law of Treaties. It was understood that Vice-Chairman Estrada-Oyuela would consult, as necessary, with delegations in this work.

28. The Committee, at its 9th plenary meeting, on 9 May 1992, agreed upon and adopted the text of the United Nations Framework Convention on Climate Change as contained in annex I to this report (see A/AC.237/18 (Part II)/Add.1 and Corr.1) and recommended it for signature during the United Nations Conference on Environment and Development. It was agreed that the precise date of opening for signature of the Convention would be communicated by the Depositary, the Secretary-General of the United Nations.

29. The adoption of the Convention was greeted by a standing ovation following which 38 delegations made statements. All paid tribute to the Chairman, his Bureau and the secretariat for their unstinting efforts often under challenging and sometimes difficult circumstances. Many mentioned the patience, wisdom, skill, diplomacy and leadership of the Chairman in guiding the Committee's work.

30. A number of delegations commented on the rapid environmental degradation and the particular needs of the developing countries. The potential effects of climate change would affect all countries but the impacts were likely to be greatest in the least developed countries.

31. The adoption of the Convention was described variously as an outstanding success, a historic occasion, a cause for hope. Most delegations agreed that the Convention was not an ideal one, observing that it sought to take into

account a wide range of concerns. They felt that the Convention was a carefully balanced package which was not easy to accept, but that it represented the maximum that was politically feasible and the best that could be achieved by all parties at this stage. Some delegations, however, felt that the Convention did not go far enough, in particular as regards the commitments of developed countries, the provisions for communication and review of information and those on the financial mechanism.

32. The Convention was described as a "process treaty" and an essential further step in a process of implementing a common global strategy for addressing climate change. It created a solid and comprehensive foundation for further national measures and policies. Moreover, it provided for a dynamic follow-up process including a review by the first session of the conference of the parties of policies and measures adopted by developed country parties. That session would be convened not later than one year after the entry into force of the Convention.

33. Several delegations noted that the Convention had been adopted by consensus. The negotiations had thus demonstrated a spirit of determination, cooperation and accommodation by all delegations. They agreed that the Convention was a first step towards a new era of understanding and global cooperation. Developed countries looked forward to an effective legal regime on climate change with effective and clearly defined mechanisms. Developing countries further hoped that in the coming years there would be more definite commitments on the part of their negotiating partners so that the adverse effects of climate change could be effectively mitigated while allowing for sustainable development. All parties recognized the need to work together to realize the opportunities created by the Convention.

34. Several delegations expressed some reservations over elements of the text of the Convention and four (Egypt, Kuwait, Oman and Saudi Arabia) submitted preferred alternative wordings for these. The representative of the Islamic Republic of Iran insisted that development was an inalienable right for all people and hence the acceptance of the package by his Government should not be construed as overlooking its right to development.

35. Three delegations (Bulgaria, Czechoslovakia and Turkey) reserved their positions regarding the listing of countries in the annexes to the Convention.

36. The representative of Malaysia considered that the Convention had not been negotiated in a spirit of true partnership. He commented that the text adopted had not been seen before the resumed fifth session, that important and substantive parts of the text had been drafted after consultations with the Bureau and selected delegates only and that there had been no plenary discussion. He reserved the position of his country on the Convention, and stated that he could not join in its adoption nor participate in any resolutions emanating from the meeting.

37. The representative of Portugal, on behalf of the European Economic Community and its member States declared, for the purposes of clarity, that

the inclusion of the European Economic Community and its member States in the lists in the annexes to the Convention was without prejudice to the division of competence and responsibilities between the Community and its member States, which was to be declared in accordance with paragraph 3 of article 22 of the Convention.

38. It was understood, with reference to articles 20 and 21 of the Convention, that States eligible to sign, ratify, accept, approve or accede to the Convention would include all those invited to participate in the work of the Committee.

39. The representative of Germany extended an invitation of his Government to host the first session of the conference of the parties.

40. The Executive Secretary conveyed a message from the Secretary-General of the United Nations, who expressed warm congratulations to the Chairman and all members of the Committee on the successful completion of the task entrusted to them by the General Assembly. He expressed satisfaction that such an important legal instrument, touching upon the political and economic interests of States, had been completed under the auspices of the United Nations.

41. On his own behalf, the Executive Secretary said he believed that delegations had exerted all their professional skills and character in managing to produce a meaningful convention, designed to attract the widest participation of States in a collaborative process. That process was aimed at stabilizing the concentrations of greenhouse gases in the atmosphere at a safe level. The Convention was a package the effectiveness of which would depend on the vigour with which the process was pursued; its equity would depend on the way in which obligations were fulfilled. Finally, he paid tribute to the leadership of Mr. Jean Ripert, the Chairman of the Committee.

42. Concluding the fifth session of the Committee, the Chairman said that the text of the Convention just agreed upon and adopted was a reasonable point of departure for dealing with the problem of climate change. He thanked all who had participated in its preparation and particularly all members of the Committee, the Bureau and the secretariat. He also paid tribute to the World Meteorological Organization and the United Nations Environment Programme for setting in motion international action and for continuing to support the ongoing work. Finally he dedicated the successful adoption of the Convention to the United Nations which had made the negotiations possible.

IV. REVIEW OF EXTRABUDGETARY FUNDS

43. At the 8th plenary meeting, on 8 May, the Executive Secretary introduced the document entitled "Review of extrabudgetary funds" (A/AC.237/20). He thanked all donors, national and institutional, for their contributions to both of the funds set up in connection with the work of the Committee.

Decision 1/CP.17

Establishment of an Ad Hoc Working Group on the Durban Platform for Enhanced Action

The Conference of the Parties,

Recognizing that climate change represents an urgent and potentially irreversible threat to human societies and the planet and thus requires to be urgently addressed by all Parties, and acknowledging that the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response, with a view to accelerating the reduction of global greenhouse gas emissions,

Noting with grave concern the significant gap between the aggregate effect of Parties' mitigation pledges in terms of global annual emissions of greenhouse gases by 2020 and aggregate emission pathways consistent with having a likely chance of holding the increase in global average temperature below 2 °C or 1.5 °C above pre-industrial levels,

Recognizing that fulfilling the ultimate objective of the Convention will require strengthening of the multilateral, rules-based regime under the Convention,

Noting decision 1/CMP.7,

Also noting decision 2/CP.17,

1. *Decides* to extend the Ad Hoc Working Group on Long-term Cooperative Action under the Convention for one year in order for it to continue its work and reach the agreed outcome pursuant to decision 1/CP.13 (Bali Action Plan) through decisions adopted by the sixteenth, seventeenth and eighteenth sessions of the Conference of the Parties, at which time the Ad Hoc Working Group on Long-term Cooperative Action under the Convention shall be terminated;

2. *Also decides* to launch a process to develop a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties, through a subsidiary body under the Convention hereby established and to be known as the Ad Hoc Working Group on the Durban Platform for Enhanced Action;

3. *Further decides* that the Ad Hoc Working Group on the Durban Platform for Enhanced Action shall start its work as a matter of urgency in the first half of 2012 and shall report to future sessions of the Conference of the Parties on the progress of its work;

4. *Decides* that the Ad Hoc Working Group on the Durban Platform for Enhanced Action shall complete its work as early as possible but no later than 2015 in order to adopt this protocol, another legal instrument or an agreed outcome with legal force at the twenty-first session of the Conference of the Parties and for it to come into effect and be implemented from 2020;

5. *Also decides* that the Ad Hoc Working Group on the Durban Platform for Enhanced Action shall plan its work in the first half of 2012, including, inter alia, on mitigation, adaptation, finance, technology development and transfer, transparency of action and support, and capacity-building, drawing upon submissions from Parties and relevant technical, social and economic information and expertise;

6. *Further decides* that the process shall raise the level of ambition and shall be informed, inter alia, by the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, the outcomes of the 2013–2015 review and the work of the subsidiary bodies;

7. *Decides* to launch a workplan on enhancing mitigation ambition to identify and to explore options for a range of actions that can close the ambition gap with a view to ensuring the highest possible mitigation efforts by all Parties;

8. *Requests* Parties and observer organizations to submit by 28 February 2012 their views on options and ways for further increasing the level of ambition and decides to hold an in-session workshop at the first negotiating session in 2012 to consider options and ways for increasing ambition and possible further actions.

10th plenary meeting
11 December 2011

Decision 1/CP.19

Further advancing the Durban Platform

The Conference of the Parties,

Expressing serious concern that the warming of the climate system is unequivocal and since the 1950s, many of the observed changes are unprecedented over decades to millennia, as indicated by the findings contained in the contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change,

Warning that climate change represents an urgent and potentially irreversible threat to human societies, future generations and the planet, that continued emissions of greenhouse gases will cause further warming and changes in all components of the climate system and that limiting climate change will require substantial and sustained reductions of greenhouse gas emissions,

Underlining the significant gap between the aggregate effect of Parties' mitigation pledges in terms of global annual emissions of greenhouse gases by 2020 and aggregate emission pathways consistent with having a likely chance of holding the increase in global average temperature below 2 °C or 1.5 °C above pre-industrial levels,

Affirming that fulfilling the ultimate objective of the Convention will require strengthening the multilateral, rules-based regime and the urgent and sustained implementation of existing commitments under the Convention,

Urging all Parties to the Kyoto Protocol to ratify and implement the Doha Amendment to the Kyoto Protocol as a matter of urgency,

Emphasizing that enhanced action and international cooperation on adaptation is urgently required to enable and support the implementation of adaptation actions aimed at reducing vulnerability and building resilience in developing country Parties, taking into account the urgent and immediate needs of those developing countries that are particularly vulnerable,

Recognizing the importance of regional and international cooperation with a view to promoting the establishment of alliances to support the implementation of actions aimed at reducing vulnerability and building resilience to the adverse effects of climate change,

Mindful of its decision that the Ad Hoc Working Group on the Durban Platform for Enhanced Action will consider elements for a draft negotiating text no later than at its session to be held in conjunction with the twentieth session of the Conference of the Parties (December 2014) with a view to making available a negotiating text before May 2015,

Reiterating that the work of the Ad Hoc Working Group on the Durban Platform for Enhanced Action shall be guided by the principles of the Convention,

Noting decision 3/CP.19 (Long-term climate finance),

Recalling decisions 1/CP.17, 2/CP.18 and 1/CMP.8,

Also recalling decision 24/CP.18,

1. *Requests* the Ad Hoc Working Group on the Durban Platform for Enhanced Action to accelerate its development of a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties in the context of decision 1/CP.17, paragraphs 2–6, and its conduct of the workplan on enhancing mitigation ambition

to identify and to explore options for a range of actions that can close the ambition gap, with a view to ensuring the highest possible mitigation efforts by all Parties in the context of decision 1/CP.17, paragraphs 7 and 8;

2. *Decides*, in the context of its determination to adopt a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties at its twenty-first session (December 2015) and for it to come into effect and be implemented from 2020:

(a) To request the Ad Hoc Working Group on the Durban Platform for Enhanced Action to further elaborate, beginning at its first session in 2014, elements for a draft negotiating text, taking into consideration its work, including, inter alia, on mitigation, adaptation, finance, technology development and transfer, capacity-building and transparency of action and support;

(b) To invite all Parties to initiate or intensify domestic preparations for their intended nationally determined contributions, without prejudice to the legal nature of the contributions, in the context of adopting a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties towards achieving the objective of the Convention as set out in its Article 2 and to communicate them well in advance of the twenty-first session of the Conference of the Parties (by the first quarter of 2015 by those Parties ready to do so) in a manner that facilitates the clarity, transparency and understanding of the intended contributions, without prejudice to the legal nature of the contributions;

(c) To request the Ad Hoc Working Group on the Durban Platform for Enhanced Action to identify, by the twentieth session of the Conference of the Parties, the information that Parties will provide when putting forward their contributions, without prejudice to the legal nature of the contributions, referred to in paragraph 2(b) above;

(d) To urge and request developed country Parties, the operating entities of the financial mechanism and any other organizations in a position to do so to provide support for the related activities referred to in paragraphs 2(b) and 2(c) above as early as possible in 2014;

3. *Resolves* to accelerate the full implementation of the decisions constituting the agreed outcome pursuant to decision 1/CP.13 (Bali Action Plan),[1] in particular in relation to the provision of means of implementation, including technology, finance and capacity-building support for developing country Parties, recognizing that such implementation will enhance ambition in the pre-2020 period;

4. *Also resolves* to enhance ambition in the pre-2020 period in order to ensure the highest possible mitigation efforts under the Convention by all Parties by:

(a) Urging each Party that has not yet communicated a quantified economy-wide emission reduction target or nationally appropriate mitigation action, as applicable, to do so;

(b) Urging each developed country Party to implement without delay its quantified economy-wide emission reduction target under the Convention and, if it is also a Party to the Kyoto Protocol, its quantified emission limitation or reduction commitment for the second commitment period of the Kyoto Protocol, if applicable;

[1] Decisions 1/CP.18 (Agreed outcome pursuant to the Bali Action Plan), 2 /CP.17 (Outcome of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention), 1/CP.16 (Cancun Agreements) and other relevant decisions.

(c) Urging each developed country Party to revisit its quantified economy-wide emission reduction target under the Convention and, if it is also a Party to the Kyoto Protocol, its quantified emission limitation or reduction commitment for the second commitment period of the Kyoto Protocol, if applicable, in accordance with decision 1/CMP.8, paragraphs 7–11;

(d) Urging each developed country Party to periodically evaluate the continuing application of any conditions associated with its quantified economy-wide emission reduction target, with a view to adjusting, resolving or removing such conditions;

(e) Urging developed country Parties to increase technology, finance and capacity-building support to enable increased mitigation ambition by developing country Parties;

(f) Urging each developing country Party that has communicated its nationally appropriate mitigation action to implement it and, where appropriate, consider further action, recognizing that nationally appropriate mitigation actions will be taken in the context of sustainable development, supported and enabled by technology, finance and capacity-building;

5. *Decides* to accelerate activities under the workplan on enhancing mitigation ambition in accordance with decision 1/CP.17, paragraphs 7 and 8, by:

(a) Intensifying, as from 2014, the technical examination of opportunities for actions with high mitigation potential, including those with adaptation and sustainable development co-benefits, with a focus on the implementation of policies, practices and technologies that are substantial, scalable and replicable, with a view to promoting voluntary cooperation on concrete actions in relation to identified mitigation opportunities in accordance with nationally defined development priorities;

(b) Facilitating the sharing among Parties of experiences and best practices of cities and subnational authorities, where appropriate, in identifying and implementing opportunities to mitigate greenhouse gas emissions and adapt to the adverse impacts of climate change, with a view to promoting the exchange of information and voluntary cooperation;

(c) Inviting Parties to promote the voluntary cancellation of certified emission reductions, without double counting, as a means of closing the pre-2020 ambition gap;

(d) Considering further activities to be undertaken under that workplan at the twentieth session of the Conference of the Parties;

6. *Notes* the convening of the climate summit on 23 September 2014 by the United Nations Secretary-General aimed at mobilizing action and ambition in relation to climate change;

7. *Calls* upon Parties to intensify their high-level engagement on the Durban Platform for Enhanced Action through an in-session high-level ministerial dialogue to be held in conjunction with the fortieth sessions of the subsidiary bodies (June 2014) and another such dialogue to be held in conjunction with the twentieth session of the Conference of the Parties.

10th plenary meeting
23 November 2013

United Nations FCCC/CP/2014/10/Add.1

Framework Convention on Climate Change

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Addendum

Part two: Action taken by the Conference of the Parties at its twentieth session

Contents

Decisions adopted by the Conference of the Parties

Decision		*Page*
1/CP.20	Lima Call for Climate Action	2

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Decision 1/CP.20

Lima Call for Climate Action

The Conference of the Parties,

Reiterating that the work of the Ad Hoc Working Group on the Durban Platform for Enhanced Action shall be under the Convention and guided by its principles,

Recalling the objective of the Convention as set out in its Article 2,

Also recalling all the relevant decisions of the Conference of the Parties, particularly decisions 1/CP.17, 2/CP.18 and 1/CP.19,

Affirming its determination to strengthen adaptation action through the protocol, another legal instrument or agreed outcome with legal force under the Convention to be adopted at the twenty-first session of the Conference of the Parties (November-December 2015),

Recalling decisions 2/CP.19 and 2/CP.20 and welcoming the progress made in Lima, Peru, towards the implementation of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts,

Noting with grave concern the significant gap between the aggregate effect of Parties' mitigation pledges in terms of global annual emissions of greenhouse gases by 2020 and aggregate emission pathways consistent with having a likely chance of holding the increase in global average temperature below 2 °C or 1.5 °C above pre-industrial levels,

1. *Confirms* that the Ad Hoc Working Group on the Durban Platform for Enhanced Action shall complete the work referred to in decision 1/CP.17, paragraph 2, as early as possible in order for the Conference of the Parties at its twenty-first session to adopt a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties;

2. *Decides* that the protocol, another legal instrument or agreed outcome with legal force under the Convention applicable to all Parties shall address in a balanced manner, inter alia, mitigation, adaptation, finance, technology development and transfer, and capacity-building, and transparency of action and support;

3. *Underscores* its commitment to reaching an ambitious agreement in 2015 that reflects the principle of common but differentiated responsibilities and respective capabilities, in light of different national circumstances;

4. *Urges* developed country Parties to provide and mobilize enhanced financial support to developing country Parties for ambitious mitigation and adaptation actions, especially to Parties that are particularly vulnerable to the adverse effects of climate change; and recognizes complementary support by other Parties;

5. *Acknowledges* the progress made in Lima in elaborating the elements for a draft negotiating text as contained in the annex;

6. *Decides* that the Ad Hoc Working Group on the Durban Platform for Enhanced Action will intensify its work, with a view to making available a negotiating text for a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties before May 2015;

7. *Requests* the secretariat to communicate the negotiating text referred to in paragraph 6 above to Parties in accordance with provisions of the Convention and the applied rules of procedure, while noting that such communication will not prejudice whether the outcome will be a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties;

8. *Notes* that the arrangements specified in this decision in relation to intended nationally determined contributions are without prejudice to the legal nature and content of the intended nationally determined contributions of Parties or to the content of the protocol, another legal instrument or agreed outcome with legal force under the Convention applicable to all Parties;

9. *Reiterates* its invitation to each Party to communicate to the secretariat its intended nationally determined contribution towards achieving the objective of the Convention as set out in its Article 2;

10. *Agrees* that each Party's intended nationally determined contribution towards achieving the objective of the Convention as set out in its Article 2 will represent a progression beyond the current undertaking of that Party;

11. *Also agrees* that the least developed countries and small island developing States may communicate information on strategies, plans and actions for low greenhouse gas emission development reflecting their special circumstances in the context of intended nationally determined contributions;

12. *Invites* all Parties to consider communicating their undertakings in adaptation planning or consider including an adaptation component in their intended nationally determined contributions;

13. *Reiterates* its invitation to all Parties to communicate their intended nationally determined contributions well in advance of the twenty-first session of the Conference of the Parties (by the first quarter of 2015 by those Parties ready to do so) in a manner that facilitates the clarity, transparency and understanding of the intended nationally determined contributions;

14. *Agrees* that the information to be provided by Parties communicating their intended nationally determined contributions, in order to facilitate clarity, transparency and understanding, may include, as appropriate, inter alia, quantifiable information on the reference point (including, as appropriate, a base year), time frames and/or periods for implementation, scope and coverage, planning processes, assumptions and methodological approaches including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals, and how the Party considers that its intended nationally determined contribution is fair and ambitious, in light of its national circumstances, and how it contributes towards achieving the objective of the Convention as set out in its Article 2;

15. *Reiterates* its call to developed country Parties, the operating entities of the Financial Mechanism and any other organizations in a position to do so to provide support for the preparation and communication of the intended nationally determined contributions of Parties that may need such support;

16. *Requests* the secretariat to:

(a) Publish on the UNFCCC website the intended nationally determined contributions as communicated;

(b) Prepare by 1 November 2015 a synthesis report on the aggregate effect of the intended nationally determined contributions communicated by Parties by 1 October 2015;

17. *Encourages* all Parties to the Kyoto Protocol to ratify and implement the Doha Amendment to the Kyoto Protocol;

18. *Reiterates* its resolve as set out in decision 1/CP.19, paragraphs 3 and 4, to accelerate the full implementation of the decisions constituting the agreed outcome pursuant to decision 1/CP.13 and enhance ambition in the pre-2020 period in order to ensure the highest possible mitigation efforts under the Convention by all Parties;

19. *Decides* to continue the technical examination of opportunities with high mitigation potential, including those with adaptation, health and sustainable development co-benefits, in the period 2015–2020, by requesting the secretariat to:

(a) Organize a series of in-session technical expert meetings which:

(i) Facilitate Parties in the identification of policy options, practices and technologies and in planning for their implementation in accordance with nationally defined development priorities;

(ii) Build on and utilize the related activities of, and further enhance collaboration and synergies among, the Technology Executive Committee, the Climate Technology Centre and Network, the Durban Forum on capacity-building, the Executive Board of the clean development mechanism and the operating entities of the Financial Mechanism;

(iii) Build on previous technical expert meetings[1] in order to hone and focus on actionable policy options;

(iv) Provide meaningful and regular opportunities for the effective engagement of experts from Parties, relevant international organizations, civil society, indigenous peoples, women, youth, academic institutions, the private sector, and subnational authorities nominated by their respective countries;

(v) Support the accelerated implementation of policy options and enhanced mitigation action, including through international cooperation;

(vi) Facilitate the enhanced engagement of all Parties through the announcement of topics to be addressed, agendas and related materials at least two months in advance of technical expert meetings;

(b) Update, following the technical expert meetings referred to in paragraph 19(a) above, the technical paper on the mitigation benefits of actions, and on initiatives and options to enhance mitigation ambition, compiling information provided in submissions from Parties and observer organizations and the discussions held at the technical expert meetings and drawing on other relevant information on the implementation of policy options at all levels, including through multilateral cooperation;

(c) Disseminate the information referred to in paragraph 19(b) above, including by publishing a summary for policymakers;

20. *Requests* the Ad Hoc Working Group on the Durban Platform for Enhanced Action to make recommendations in relation to further advancing the technical examination process, including the periodic assessment of the technical expert meetings, to the Conference of the Parties at its twenty-first session;

[1] In 2014 the Ad Hoc Working Group on the Durban Platform for Enhanced Action undertook technical expert meetings on renewable energy, energy efficiency, land-use change and forestry (including REDD-plus), urban environments, carbon dioxide capture, use and storage and non-carbon dioxide greenhouse gases.

21. *Welcomes* the Lima Climate Action High-level Meeting convened by the President of the Conference of the Parties on 11 December 2014 and encourages the Executive Secretary and the President of the Conference of the Parties to convene an annual high-level event on enhancing implementation of climate action;

22. *Notes* the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in this decision and requests that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

Annex

[English only]

Elements for a draft negotiating text[1]

A. Preamble[2]

Option 1: *{Placeholder for preamble}*

Option 2:

The Parties to this agreement,

In pursuit of the ultimate objective of the Convention as stated in its Article 2,

Being guided by the principles of the Convention as set out in its Article 3, including that Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with historical responsibility, common but differentiated responsibilities and the provisions of Article 4 of the Convention / evolving common but differentiated responsibilities and respective capabilities / evolving economic and emission trends which will continue post-2020, in order to progressively enhance the levels of ambition,

Recalling the provisions of the Convention and determined to further enhance its full, effective and sustained implementation from 2020 through a strengthened multilateral rules-based regime established by this agreement,

Also recalling the commitments undertaken by Parties under the Convention in accordance with its Article 4,

Further recalling all the existing decisions adopted by the Conference of the Parties to the Convention and the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, including, in particular, the agreed outcome pursuant to the Bali Action Plan and the Doha Amendment,

Recalling the outcomes of the Rio+20 Conference, titled "the Future we want",

Option (a): *Acknowledging* that the global nature and urgency of climate change calls for the participation / widest possible participation, cooperation and ambitious action by all Parties,

Option (b): *Acknowledging* that the global nature and urgency of climate change calls for the widest possible cooperation of all Parties, as well as their participation and enhanced action in an effective and appropriate international response in accordance with their common but differentiated responsibilities and respective capabilities, and their specific national and regional development priorities, objectives and circumstances / social and economic conditions with developed country Parties taking the lead,

Being guided by the best available scientific knowledge, including, inter alia, the assessment reports / the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, and inputs and resources from Parties,

Recognizing that deep cuts in global greenhouse gas emissions will be required to achieve the ultimate objective of the Convention and the long-term temperature limit / holding the increase in global average temperature, and that such cuts must be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner,

Also recognizing that scenarios consistent with a likely chance of holding the global average temperature increase to below 2 °C relative to pre-industrial levels include substantial cuts in anthropogenic greenhouse gas emissions by mid-century and net emission levels near zero gigatonnes of carbon dioxide equivalent or below in 2100,

[1] These elements for a draft negotiating text reflect work in progress. They neither indicate convergence on the proposals presented nor do they preclude new proposals from emerging in the course of the negotiations in 2015.

[2] Headings and subheadings used throughout these elements for a draft negotiating text are provisional and only intended to orientate the reader.

Further recognizing that economy-wide emission reduction budgets provide the highest level of clarity, predictability and environmental integrity,

Acknowledging that carbon pricing is a key approach for cost-effectiveness of the cuts in global greenhouse gas emissions,

Option (a): *Emphasizing* that adaptation is a global challenge and a common responsibility that requires global solidarity that must be addressed with the same urgency as, and in political / legal parity with, mitigation,

Option (b): *Emphasizing* that adaptation is a global challenge that must be addressed with the same urgency as, and in balance with, mitigation, and that enhanced action and international cooperation on adaptation is urgently required in order to enable and support the implementation of adaptation actions,

Option (c): *Emphasizing* that enhanced action and international cooperation on adaptation is urgently required to enable and support the implementation of adaptation actions aimed at reducing vulnerability and building resilience in developing country Parties, taking into account the urgent and immediate needs of those developing countries that are particularly vulnerable,

Option (d): *Notes* that adaptation is a global challenge that must be addressed with the same urgency as mitigation,

Reaffirming the importance of education, training, public awareness, public participation, public access to information and international cooperation on these matters for promoting changes in lifestyles, attitudes and behaviour needed to foster low-emission and climate-resilient development and to mobilize public support for climate policies and action,

Also reaffirming the need for developed country Parties to provide new, additional, adequate and predictable financial resources, including financial resources for the transfer of technology to and capacity-building in developing countries for addressing mitigation and adaptation needs and complying with their obligations under this agreement, while ensuring a balanced financial resources allocation between adaptation and mitigation,

Stressing that all actions to address climate change and all the processes established under this agreement should ensure a gender-responsive approach, take into account environmental integrity / the protection of the integrity of Mother Earth, and respect human rights, the right to development and the rights of indigenous peoples,

Reaffirming that responses to climate change should be coordinated with social and economic development in an integrated manner with a view to avoiding adverse impacts on the latter, taking into full account the legitimate priority needs of developing countries and their right to equitable access to sustainable development and for achieving economic growth and the eradication of poverty,

Also reaffirming that all developing countries need access to the resources required to achieve sustainable social and economic development and that, in order for developing countries to progress towards that goal, their energy consumption will need to grow, taking into account the opportunities for achieving greater energy efficiency and for reducing greenhouse gas emissions, including through the application of new technologies on terms which make such an application economically and socially beneficial,

Recognizing that action / cooperative action by and among subnational authorities, intergovernmental organizations, civil society, indigenous peoples, local communities, the private sector, financial institutions and Parties can catalyse and significantly enhance the impact of policy implementation by Parties in reducing emissions, reducing vulnerability and building resilience to the adverse effects of climate change,

Recalling the Vienna Convention on the Law of Treaties,

Have agreed to further enhance the full, effective and sustained implementation of the Convention as follows / Have agreed as follows / Have agreed to this protocol, another legal instrument, or an agreed outcome with legal force with the aim of furthering the implementation of the Convention and its objective:

B. Definitions

For the purposes of this agreement the following terms are defined:

- The "governing body" means the governing body of this agreement;
- Party;

- "Emission reductions" means the sum of all reduced emissions and increased carbon stocks;
- (Other definitions as needed.)

C. General / Objective

1. This agreement aims to achieve universal participation and is to further enhance the full, effective and sustained implementation of the principles and provisions of the Convention, commitments under the Convention and existing decisions, and to strengthen the multilateral rules-based regime under the Convention in order to achieve the objective of the Convention as set out in its Article 2.
2. All Parties to strive to achieve low greenhouse gas climate-resilient economies and societies, on the basis of equity and in accordance with their historical responsibilities, common but differentiated responsibilities / evolving common but differentiated responsibilities and respective capabilities, in order to achieve sustainable development, poverty eradication and prosperity for the benefit of present and future generations of humankind, taking fully into account the historical responsibility of developed country Parties and their leadership in combating climate change and the adverse effects thereof, and bearing in mind that economic and social development and poverty eradication are the first and overriding priorities of developing country Parties.
3. ***Option 1***:

   All Parties to take action and cooperate to further implement the Convention in order to reach its ultimate objective as stated in its Article 2, on the basis of equity and in accordance with their historical responsibilities and common but differentiated responsibilities / evolving common but differentiated responsibilities and respective capabilities, by achieving an emission pathway consistent with limiting the global average temperature increase to below 2 °C or 1.5 °C above pre-industrial levels, which entails:

   3.1 ***Option (a)***: Ensuring significant global greenhouse gas emission reductions over the next few decades or a 40–70 per cent reduction in global greenhouse gas emissions below 2010 levels by 2050 and near-zero emissions of carbon dioxide (CO_2) and other long-lived greenhouse gases by the end of the century;

   Option (b): Ensuring that global greenhouse gas emissions peak by 2020 at the latest, are reduced by at least 50 per cent by 2050 and continue to decline thereafter;

   Option (c): Ensuring significant global greenhouse gas emission reductions over the next few decades in order to achieve a global goal for substantially reducing global emissions by 2050 / consistent with the agreed global goal for substantially reducing global emissions by 2050 / consistent with the agreed global goal, and based on the best available scientific knowledge and equitable access to sustainable development;

   3.2 Ensuring resilience and adaptive capacity to the adverse effects of climate change, while recognizing the local, national and global dimensions of adaptation;

   3.3 Ensuring that all investments are resilient to climate change / consistent with sustainable development and facilitate the transition to low-emission development paths and ensuring the adequacy of financial, technology and capacity-building support for developing countries towards achieving the implementation of this agreement / objective of the Convention.

   Option 2:

   All Parties to enhance action and cooperate to further implement the Convention in order to reach its ultimate objective as stated in its Article 2, in order to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system and to allow ecosystems to adapt naturally to climate change, in order to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner, which entails:

   3.1 Parties to urgently work towards the deep reduction in global greenhouse gas emissions required to hold the increase in global average temperature below 2 °C / 1.5 °C above pre-industrial levels and to attain a global peaking of global greenhouse gas emissions as soon as possible, reaffirming that the time frame for peaking will be longer for developing countries;

   3.2 Parties' efforts should be undertaken on the basis of equity and common but differentiated responsibilities and respective capabilities, and the provision of finance, technology transfer and capacity-building to developing countries in order to support their mitigation and adaptation actions under the Convention, and take into account the imperatives of equitable access to sustainable development, the survival of countries and protecting the integrity of Mother Earth.

Option 3:

All Parties to take action and cooperate to further implement the Convention in order to reach its ultimate objective as stated in its Article 2, on the basis of equity and in accordance with their common but differentiated responsibilities / evolving common but differentiated responsibilities and respective capabilities, by achieving an emission pathway consistent with limiting the global average temperature increase to below 2 °C or 1.5 °C above pre-industrial levels and with achieving climate resilience.

4. Parties recognize that the level and pace of mitigation ambition / efforts will determine the extent to which Parties will need to adapt and address loss and damage, and associated costs thereof, as well as the need to explore holistic and mutually reinforcing approaches to enhancing mitigation and adaptation efforts and to increase the overall level of ambition, which will depend on the extent of financial, technology and capacity-building support provided by developed country Parties to developing country Parties.

5. ***Option 1***: Each Party to take action at the highest level of ambition / mitigation ambition, reflecting its national circumstances, and to progressively increase that level of ambition;

   Option 2: All Parties to take action at the highest level of ambition and to progressively increase that level of ambition, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, with developed countries taking the lead;

   Option 3: Parties to enhance their actions and contributions in accordance with Article 4 of the Convention;

   Option 4: A global emission budget to be divided among all Parties, in accordance with the principles and provisions of the Convention, in order to limit global warming this century to below 1.5 °C according to the Intergovernmental Panel on Climate Change (IPCC) assessment. The distribution of the global emission budget should be undertaken in accordance with historical responsibilities, ecological footprint, capabilities and state of development.

6. ***Option 1***: Parties with the greatest responsibility and highest capability to demonstrate leadership:

   6.1 Developed country Parties to take the lead in fully implementing existing obligations under the Convention in relation to mitigation and support, in line with their historical responsibility;

   6.2 Leadership demonstrated by any Party to be recognized, as well as the need to incentivize and enable such leadership through cooperation and support.

   Option 2: Parties with the greatest responsibility and highest capability to demonstrate leadership.

   Option 3: In accordance with Article 4 of the Convention, developed country Parties to take the lead in fully implementing existing obligations and commitments under the Convention in relation to emission reduction and the provision of financial, technology and capacity-building support to developing country Parties, in line with their historical responsibility.

7. ***Option 1***: Commitments / contributions of Parties particularly vulnerable to the adverse effects of climate change, especially the least developed countries (LDCs) and small island developing States (SIDS), to reflect their efforts in the context of their specific needs and special situations;

   Option 2: Commitments / contributions / actions of developing country Parties, especially those referred to in Article 4, paragraphs 8–10, of the Convention, including the least developed countries (LDCs) and small island developing States (SIDS), to reflect their efforts in the context of sustainable development and their specific needs and special circumstances, bearing in mind that the extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related to financial resources and the transfer of technology.

8. ***Option 1***: All Parties to prepare, maintain, communicate and implement commitments / contributions / mitigation commitments / contributions in accordance with the provisions of this agreement and to be considered, formalized / finalized and reviewed in accordance with section K below;

   Option 2: In accordance with the principles and provisions of the Convention, all Parties to prepare, maintain, communicate and implement commitments / contributions in accordance with the provisions of this agreement, and to be considered, formalized / finalized and reviewed in accordance with section K below.

9. ***Option 1***: Unilateral measures not to constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade;

   Option 2: No reference to unilateral measures in the agreement.

10. This agreement to build on the subsidiary bodies / institutional arrangements established by or under the Convention:

Option 1: All subsidiary bodies / institutional arrangements established by or under the Convention shall serve this agreement, unless otherwise decided by the governing body. The governing body may provide further guidance as appropriate;

Option 2: The subsidiary bodies / institutional arrangements established by or under the Convention shall serve this agreement as specified in the relevant sections.[3]

11. ***Option 1***: All actors, including civil society, the private sector, financial institutions, cities and other subnational authorities, local communities and indigenous peoples, are encouraged to scale up their actions and provide further opportunities for Parties to reduce emissions and/or to decrease vulnerability and build resilience to the adverse effects of climate change, without prejudice to the provisions of the Convention;

Option 2: No provision on non-state actors.

12. ***Option 1***: Parties to cooperate, including through regional approaches, bilateral, multilateral, triangular / South–South and triangular cooperation, and to take appropriate measures to develop, adopt and implement policies, strategies, regulations and/or action plans on climate change education, training, public awareness, public participation and public access to information at all levels to enable transformative change towards low-emission and climate-resilient societies;

Option 2: In addition to the existing commitments under and provisions of the Convention, Parties to cooperate and take appropriate measures to develop, adopt and implement policies, strategies, regulations and/or action plans on climate change education, training, public awareness, public participation and public access to information so as to enhance action addressing climate change;

Option 3: Parties to cooperate, including through regional, bilateral and multilateral approaches.

Structural suggestions on section C:

No need for a general section

Move paragraphs 5 and 8 to the mitigation section

Paragraphs 3, 5, 6, 7, 8, 10, 11 and 12 are or should be addressed elsewhere

Address content of paragraph 11 in a COP decision or a preambular recital

D. Mitigation

Long-term and global aspects of mitigation

13.

13.1 ***Option 1***: All Parties, in accordance with Article 4 and their common but differentiated responsibilities and respective capabilities and on the basis of equity, to enhance mitigation ambition and cooperate with a view to achieving the long-term emission reductions, in the context of Article 2 of the Convention, consistent with limiting the global average temperature increase to below 2 °C or 1.5 °C above pre-industrial levels and in the context of equitable access to sustainable development;

Option 2: All Parties to make efforts and cooperate on enhancing mitigation ambition to ensure that the aggregate level of mitigation commitments / contributions increases over time, so as to achieve the long-term emission reductions, in the context of Article 2 of the Convention, consistent with limiting the global average temperature increase to below 2 °C or 1.5 °C above pre-industrial levels;

Option 3: Parties to make efforts and cooperate to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system, in accordance with the shared vision resulting from the Bali Action Plan, including holding the increase in global average temperature below 2 °C or 1.5 °C above pre-industrial levels in the context of sustainable development, with developed country Parties taking the lead by undertaking ambitious emission reductions and providing finance, technology and capacity-building support to developing country Parties.

[3] See paragraphs 31, 33, 38, 57.1, 62.1, 92.

13.2 Parties' efforts to take the form of:

a. A long-term zero emissions sustainable development pathway:

- Consistent with carbon neutrality / net zero emissions by 2050, or full decarbonization by 2050 and/or negative emissions by 2100;
- Consistent with science and the findings of the / Intergovernmental Panel on Climate Change (IPCC) (e.g. 40–70 per cent below 2010 levels by 2050) in accordance with historical responsibilities, capabilities, and the state of development, while addressing vulnerabilities and in a cooperative manner;
- Consistent with a global reduction of greenhouse gas emissions of at least 50 per cent by 2050 compared with the levels in 1990 and a continued decline in emissions thereafter, in the context of equitable access to sustainable development and a global carbon budget;
- Consistent with emissions peaking for developed countries in 2015, with an aim of zero net emissions by 2050; in the context of equitable access to sustainable development;
- Consistent with a peaking of global greenhouse gas emissions as soon as possible, noting that the time frame for peaking may be longer in developing countries, in the context of equitable access to sustainable development.

b. A global emission budget to be divided among all Parties according to the principles and provisions of the Convention, so as to limit global warming in this century to below 1.5 °C according to the IPCC assessment. The distribution of the global emission budget should be undertaken in accordance with historical responsibilities, ecological footprint, capabilities, and state of development;

c. Stabilization of the concentration of greenhouse gases in the atmosphere at or below 350 ppm of CO_2 equivalent (CO_2 eq) in the context of equitable access to sustainable development;

d. A deviation from business as usual;

e. Low-emission development strategies.

14. Any agreed long-term objective shall be in the context of a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in sustainable manner, and shall also take into account vulnerabilities and managing transition in a sustainable manner.

Commitments / contributions / actions on mitigation

15. ***Option 1***: In accordance with Article 4 of the Convention, all Parties to progressively enhance the level of ambition of their mitigation commitments / contributions / actions such that each commitment / contribution / action is of a type, scope, scale and coverage more / no less ambitious than those previously undertaken under this agreement or the Convention or its Kyoto Protocol;

Option 2: Developed country Parties to progressively enhance the level of ambition of their mitigation commitments / contributions such that each commitment / contribution is of a type, scope, scale and coverage more / no less ambitious than those previously undertaken under this agreement or the Convention or its Kyoto Protocol;

Option 3: All Parties to progressively enhance the level of ambition of their mitigation commitments / contributions such that the scale and coverage is more / no less ambitious than those previously undertaken under this agreement or the Convention or its Kyoto Protocol;

Option 4: All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, to formulate, implement, publish and regularly update programmes containing measures to mitigate climate change in order to enhance their level of ambition after 2020.

16. ***Option 1***: In accordance with the principles of the Convention and its Article 4, each Party to prepare, communicate and implement successive nationally determined mitigation commitments / contributions / actions, which are to:

Option 2: Each Party to communicate and implement successive mitigation commitments / contributions/, which are to:

Option 3: Parties to prepare differentiated mitigation commitments for developed and developing country Parties, with developed country Parties to take the lead and developing country Parties to be provided flexibility, which are to:

16.1 ***Option 1***: Be quantified or quantifiable, which can be aggregated, and which are transparent, comparable and/or verifiable;

Option 2: Be quantified or quantifiable and which shall consider a fair and equitable distribution of the global emission budget according to a compound index of countries' participation in such a budget, and which are transparent, comparable and/or verifiable;

Option 3: Be quantified, which can be aggregated, and which are comparable, measurable, reportable and verifiable for developed country Parties, with the type, scope, scale and coverage more ambitious than those undertaken under the Convention and its Kyoto Protocol during the pre-2020 period.

Be quantified, quantifiable or qualified in a measurable, reportable and verifiable manner for developing country Parties, based on their nationally appropriate mitigation actions (NAMAs) under the Bali Action Plan;

16.2 Be accompanied by information aimed at enhancing the clarity, transparency and understanding of these commitments / contributions / actions;

16.3 ***Option 1***: Include an indicative long-term trajectory consistent with paragraph 13 above;

With developed country Parties to take the lead and make an adequate and equitable contribution to achieve the ultimate objective of the Convention as set out in its Article 2. Developing country Parties may need flexibility in indicating such long-term trajectories;

Option 2: For developed country Parties to include an indicative long-term trajectory;

For developing country Parties to be encouraged to develop a long-term green and low-carbon development strategy, plan or programme, as appropriate;

16.4 ***Option 1***: Be based on national circumstances and capacities;

Option 2: Be based on the following:

a. Common but differentiated responsibilities and respective capabilities, equity and national circumstances and capacities;

b. Parties to include one of the following options, in accordance with their common but differentiated responsibilities, national circumstances, development levels and capabilities, while recognizing that the emissions of developing countries will grow to meet their social and development needs: (i) a quantified, economy-wide, absolute emission limitation or reduction target in relation to a baseline year; (ii) a quantified, economy-wide emission limitation or reduction target relative to a projection of its emissions (iii) a quantified, economy-wide emission limitation or reduction target relative to unit of GDP in relation to a previous year; (iv) a quantified, economy-wide emission limitation and reduction target per capita; (v) non-economy-wide actions:

- Developed country Parties to take the lead in accordance with Article 3, paragraph 1, and Article 4, paragraph 2, of the Convention through quantified economy-wide, absolute emission reduction targets / commitments;
- Developing country Parties, which have been provided with means of implementation, to prepare, communicate and implement a diversity of enhanced net mitigation commitments / contributions / actions in accordance with Article 3, paragraph 1, of the Convention and in the context of sustainable development, ranging from economy-wide absolute limits on emissions, relative emission reductions, intensity targets, nationally appropriate mitigation actions, low-emission development plans and strategies, sectoral mitigation plans and strategies / taking into consideration paragraph X above;
- Developing country Parties to take a diversity of nationally determined actions in accordance with their specific needs and special circumstances as stated in Article 3, paragraph 2, of the Convention, including net avoided emissions, or also manifested as adaptation co-benefits, where appropriate;
- Developing country Parties to prepare their actions in accordance with Article 3, paragraph 1, of the Convention and their circumstances and capacities, through nationally appropriate mitigation actions, subject to the provision of means of implementation and in accordance with Article 4, paragraph 7, of the Convention;
- Major economies to take on quantified economy-wide emission reduction targets / commitments;
- Parties not included in Annex I to the Convention (non-Annex I Parties) that are in a position to do so to take on quantified economy-wide emission reduction targets / commitments;
- All Parties to take on quantified economy-wide emission reduction targets / commitments at some point in the future in accordance with their national circumstances, development levels and capabilities;

- LDCs to implement non-economy wide actions and are encouraged to develop and implement low-emission development strategies;
- For all Parties on the basis of categories that are updated over time based on evolving emissions and economic trends.

16.5 ***Option 1***: Mitigation commitments / contributions / actions of all Parties to be communicated and implemented without conditions;

Option 2: Mitigation commitments / contributions / actions of developed country Parties to be communicated and implemented without conditions;

Option 3: Each Party to communicate commitments / contributions / actions specifying an unconditional portion and may also include a conditional one;

Option 4: Mitigation commitments / contributions / actions of developing country Parties to be prepared, communicated and implemented subject to the provision of finance, technology development and transfer, and capacity-building. Developing country Parties may specify additional enhanced levels of mitigation commitments / contributions according to different levels of enhanced support by developed country Parties.

17. All Parties to maintain commitments / contributions / actions at all times.

18. ***Option 1***: Parties' proposed mitigation commitments / contributions / actions to be communicated and considered as well as formalized / finalized and reviewed in accordance with section K below;

Option 2: Parties' mitigation commitments / contributions / actions should be communicated and implemented in accordance with Article 12 of the Convention and through relevant arrangements based on the agreed outcome pursuant to the Bali Action Plan.

Parties' mitigation commitments / contributions reflected in two attachments to the agreement, one for developed and one for developing country Parties. One is a common tabular format for developed country Parties and the other a compilation of communications for developing country Parties;

Option 3: Upon joining the agreement, all Parties to submit a schedule reflecting the nationally determined contribution they intend to implement.

Parties to maintain schedule thereafter.

19. Parties may prepare, communicate and implement mitigation commitments / contributions / action jointly in accordance with decisions to be adopted by the governing body and taking into account any arrangements developed under paragraph 92.

20. ***Option 1***: The secretariat to keep and update accordingly an online registry of national mitigation targets, and actions; registry to be integral part of the agreement;

Option 2: The secretariat to maintain a list of the schedules of Parties in an information document that is made available online.

21. All Parties to develop low emission strategies.

22. All Parties to take into account joint mitigation and adaptation approaches for the integral and sustainable management of forests.

23. In meeting their commitments / contributions / actions, Parties may make use of market mechanisms and actions in the land-use sector in accordance with X.

23.1 The use of market mechanisms is to:

a. Mobilize the widest range of potential investments for adaptation and mitigation;

b. Create incentives for early action;

c. Incentivize and coordinate effective mitigation and adaptation action from the broadest range of actors, including the private sector, to support the implementation of this agreement;

d. Ensure consistency with individual commitments / contributions;

e. Be in accordance with the provisions on transparent accounting as contained in section J *(Transparency of action and support)*, in particular to avoid double counting.

23.2 The use of market mechanisms shall be supplementary to domestic action.

Institutional arrangements

24. ***Option 1***: Parties to analyse and give full consideration to what actions are necessary to meet the needs arising from the impacts of the implementation of response measures related to the mitigation commitments taken on, particularly the specific needs and concerns of developing country Parties;

Option 2: Strengthen existing arrangements by establishing a cooperative mechanism (platform) under the Convention to manage the transition to low greenhouse gas pathways, which would identify and then measure the impacts, and which would use existing tools as much as possible and further develop tools to address identified gaps and ensure their operationalization:

Option (a): The governing body shall develop and adopt modalities for:

a. An international / cooperative mechanism under the Convention to manage the transition to low GHG pathways that would identify and then measure the impacts, and which would use existing tools as much as possible and develop further tools to address identified gaps and ensure their operationalization:
   - A no-incidence arrangement to be included to safeguard economic development in developing countries;
   - In accordance with Article 4, paragraphs 8–10, of the Convention.

b. An international institution;

c. A permanent forum under the Subsidiary Body for Scientific and Technological Advice (SBSTA).

Option (b): No new arrangements for response measures within this agreement.

Structural suggestions on section D:

Accounting rules:

Option 1: Move provisions on accounting rules from section J (transparency) into this section;

Option 2: Retain provisions on accounting rules in section J.

Time frame and steps:

Option 1: Move provisions from section K into this section;

Option 2: Retain provisions in section K.

E. Adaptation and loss and damage

Adaptation

Long-term and global aspects of adaptation

25. ***Option 1***: All Parties in accordance with the principles and provisions of the Convention, its Article 4 and their common but differentiated responsibilities, and previous decisions of the Conference of the Parties (COP) to commit to cooperate to adapt to the adverse effects of climate change, ensure resilience and protect citizens and ecosystems in the context of the long-term temperature limit and to achieve sustainable development, while recognizing the local, national and transboundary dimensions of adaptation:

25.1 All / Developed country Parties to undertake the steps necessary to ensure that the level of support meets the needs for adaptation in developing countries in the context of the long-term temperature limit: Request to the SBSTA to develop methodologies for this purpose;

25.2 All Parties commit to increase efforts to adapt to climate change impacts, reduce vulnerability and increase resilience in the context of the actual increase in global mean temperature, taking into account the relationship between mitigation ambition, associated climate change impacts, and consequent adaptation needs, costs, and co-benefits.

Option 2: Developed county Parties commit to enhance support to developing country Parties in terms of finance, technology, and capacity-building, and to enable developing countries to enhance their adaptation actions so as to ensure their resilience;

Option 3: Establish a global goal for adaptation;

Option 4: No global goal for adaptation;

Option 5: Establish universal individual commitments / actions.

Commitments / contributions / actions / Commitments under Article 4 of the Convention on adaptation

26. ***Option 1***: Each Party / Developing country Parties to prepare and implement adaptation commitments / contributions / actions under Article 4 of the Convention by integrating / integrate adaptation within national development planning, mainstream adaptation into national policies, undertake a national adaptation plan (NAP) process, and strengthen governance and enabling environments subject to modalities and procedures to be developed and adopted by the governing body:

    26.1 Commitments / contributions / actions / commitments under Article 4 of the Convention should be country-driven, gender-sensitive, participatory, and fully transparent, take into account vulnerable groups and ecosystems, be based on science and traditional and indigenous knowledge, and promote the engagement of subnational and local authorities and other stakeholders;

    26.2 Developed country Parties' commitments / contributions / actions under Article 4 of the Convention to be in accordance with the relevant provisions of the Convention, reflecting / and reflect their obligation to support adaptation in developing countries in accordance with realizable temperature scenarios, in particular in SIDS and the LDCs. / Developed countries to ensure the provision of new and additional, adequate and predictable financial resources and the transfer of technology and capacity-building to meet the costs in developing countries of addressing the adverse effects of climate change and to enable developing countries to enhance their actions to adapt to climate change so that developing countries may achieve sustainable development;

    26.3 Developed countries commit to provide at least USD 50 billion per year during the period from 2020 to 2025, at least USD 100 billion per year by 2020 for adaptation activities of developing countries, in order to fulfil the obligations under Article 4, paragraphs 4, 5, 8, and 9, of the Convention;

    26.4 Developed countries should formulate adaptation support plans, including overall objectives, milestones, and sources of finance for supporting adaptation actions in developing countries in terms of finance, technology, and capacity-building to address the urgent needs of developing countries and ensure long-term support;

    26.5 Developing country Parties' adaptation commitments / contributions / actions to:

        a. Be in accordance with the relevant provisions of the Convention;

        b. Include economic diversification;

        c. Encourage developing country Parties to showcase their efforts and needs and to help to recognize national efforts consistent with the long-term temperature limit;

        d. Be supported by predictable, grant-based, long-term, additional and measurable finance, technology, and capacity-building support from developed country Parties, Parties included in Annex II to the Convention (Annex II Parties), and/or all Parties in a position to do so;

        e. Not impose additional burdens or reporting requirements on developing country Parties, in particular on SIDS and the LDCs;

        f. Build on adaptation mechanisms and processes under the Convention, including national adaptation plans (NAPs) and national adaptation programmes of action, and existing arrangements for finance. All developing countries are not in the position to make financial commitments or contributions to any institutional or international mechanisms. Adaptation investments by developing countries should be recognized as their contributions to the global effort to respond to climate change.

    26.6 ***Option (a)***: Commitments / contributions / actions to be consistent with / informed by the NAP process subject to modalities and procedures to be developed and adopted by the governing body:

        a. NAPs provide the basis for all countries to assess vulnerabilities and identify and implement adaptation measures;

        b. NAPs to go beyond planning and mainstreaming / into concrete actions on the ground / implementation / integrating by defining modalities for support and implementation;

        c. Ensure that the NAP process is undertaken in all interested developing countries, in particular in SIDS and the LDCs, and in Africa;

        d. The provision of support for NAPs to build on progress made by the Least Developed Countries Fund (LDCF), the Special Climate Change Fund (SCCF), the Green Climate Fund (GCF), the Adaptation Fund, the Least Developed Countries Expert Group, the Adaptation Committee and multilateral and bilateral organizations and agencies.

    Option (b): Parties, through the NAP process, to strive in the medium and long term to reduce vulnerability to the impacts of climate change and facilitate the integration of climate change adaptation, in a coherent

manner, into relevant new and existing policies, programs and activities, in particular national development planning processes and strategies. National adaptation planning processes should not be mandatory or prescriptive nor result in the duplication of efforts undertaken, but should rather facilitate country-owned, country-driven action.

Option 2: Parties undertake national adaptation planning processes, with a view to integrating climate resilience into national level planning and action in order to reduce vulnerability, and to strengthen governance and enabling environments. All Parties should take adaptation actions. Those Parties with limited capacities require support from those countries in a position to provide such support.

27. Parties to communicate their commitments / contributions / actions / commitments under Article 4 of the Convention / adaptation priorities / support / level of support needs through the intended nationally determined contribution (INDC) process, in accordance with the modalities and procedures to be developed and adopted by the governing body / progress in enhancing adaptation action or integrating adaptation into planning, policies or action through biennial communications:

    27.1 National communications and biennial update reports and biennial reports to be the main vehicle for reporting actions, and support and to be strengthened;

    27.2 The governing body shall adopt further guidance on reporting on adaptation and further facilitating / may facilitate the sharing of information on progress and experiences in preparing and implementing adaptation actions;

    27.3 The governing body shall / may develop a structured dialogue to enhance communication of information on adaptation, in accordance with common but differentiated responsibilities and respective capabilities. Developed countries to enhance reporting on support.

28. Parties to take into account joint mitigation and adaptation approaches referred to in section D, paragraph 22.

Monitoring and evaluation / Monitoring and evaluation for Annex II Parties

29. ***Option 1***: Monitoring and evaluation of, reporting on, and learning from plans, policies and programmes shall be strengthened and /or institutionalized:

    a. Strengthen and improve climate-related research and systematic observation and provide enhanced support;

    b. Consider indicators for governance and planning;

    c. Monitor gaps in adaptation and needs under different scenarios;

    d. Monitoring and evaluation to focus on the provision and adequacy of support.

    Option 2: Monitoring and reporting should be on progress and experiences, lessons learned, good practices, and on gaps and opportunities more broadly;

    Option 3: Monitoring and evaluation, including reporting and learning from plans, policies and programmes should be a country-driven and country-specific process that would not impose any additional burden on developing country Parties; developed country Parties should support developing country Parties to strengthen and implement climate-related research and systematic observation, and should provide enhanced support and monitor gaps in adaptation and needs under different scenarios.

Sharing information, knowledge and lessons learned

30. All Parties to enhance learning on adaptation through sharing of information, knowledge and lessons learned on adaptation practices, subject to modalities and procedures to be adopted / developed:

    30.1 The governing body shall request the SBSTA / Adaptation Committee to develop guidelines for strengthening the sharing of information, knowledge and lessons learned under the Nairobi work programme on impacts, vulnerability and adaptation to climate change:

        a. Address the knowledge gap in the area of implementation of adaptation;

        b. Strengthen local and institutional capacity;

        c. Enhance regional and transboundary aspects;

        d. Encourage all Parties to implement education and public awareness programmes in accordance with paragraph 12.

Institutional arrangements

31. ***Option 1***: Developed country Parties and Annex II Parties and/or all Parties in a position to do so to ensure the effective implementation of arrangements for adaptation through the provision of sufficient adequate, predictable, transparent and additional support to developing country Parties in the context of Article 4, paragraphs 3–5 and 7 of the Convention:

Option 2: Institutional arrangements on adaptation / relevant to adaptation, including the Adaptation Committee and the Least Developed Countries Expert Group, and to loss and damage under the Convention shall serve this agreement and support Parties in the implementation of their adaptation commitments / contributions / actions under this agreement:

31.1 The governing body shall request the Adaptation Committee to:

a. Review the work of the institutional arrangements under the Convention in 2017 to ensure and enhance the coherence of their work, and prepare recommendations for consideration at COP 23 and/or the governing body;

b. Establish and maintain stronger linkages with the GCF and other funds;

c. Evaluate information on support for adaptation;

d. Provide recommendations on existing methodologies for adaptation.

31.2 The governing body shall strengthen institutional arrangements for adaptation by:

a. Providing further guidance on how to assist developing country Parties to move to full-scale implementation on the basis of their NAPs;

b. Articulating linkages between, and enhancing the integrated operation of, institutions and/or optimizing assistance for commitments / contributions on adaptation to ensure that the existing institutions such as the Adaptation Committee, the Technology Executive Committee (TEC), the Standing Committee on Finance (SCF), and the GCF are enhanced and to support adaptation actions of developing countries;

c. Encouraging the establishment of regional adaptation centres in major regions to help to localize support, conduct research, exchange knowledge and provide training for governments.

31.3 The governing body shall further strengthen institutional arrangements for adaptation by:

Option 1: Establishing new institutional arrangements:

a. A subsidiary body for adaptation to enhance the implementation of adaptation action;

b. An adaptation registry that:

- Records and showcases and/or recognizes national adaptation actions, contributions, and programmes;
- Enhances cooperation on finance, technology and capacity-building support;
- Pools information on the work of institutional arrangements under the Convention and makes that information accessible to Parties;
- Monitors and identifies progress and gaps in adaptation from a global perspective.

c. An international clearing house and registry that:

- Acts as the repository for NAPs, adaptation methods, a roster of adaptation experts, biennial adaptation support reports, and for information on technology and capacity-building for adaptation;

d. An adaptation technical and knowledge platform that works on, inter alia:

- Methodologies, metrics and indicators;
- Modelling of climate change scenarios and impacts;
- Enhancing understanding of global implications of adaptation.

e. A global knowledge platform that works on, inter alia:

- Data, information, and lessons learned on adaptation.

Option 2: No new institutional arrangements on adaptation are required for the purposes of this agreement.

Loss and damage

32. ***Option 1***: Provision for loss and damage for cases where mitigation and adaptation will not be sufficient:

    32.1 All Parties are encouraged to develop early warning systems and risk management plans, and communicate them to the secretariat by [X] as part of their national communications, in accordance with the modalities and procedures to be developed and adopted by the governing body;

    32.2 The governing body shall commence a process no later than at its first meeting to establish a compensation regime for support for developing country Parties, particularly the LDCs, SIDS and countries in Africa affected by slow onset events.

    Option 2: Reference to the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts;

    Option 3: No reference to loss and damage.

33. ***Option 1***: The Warsaw International Mechanism shall serve this agreement and be fully operationalized, with modalities and procedures to be developed and adopted by the governing body:

    33.1 Developed country Parties and/or Annex II Parties and/or all Parties in a position to do so to support the implementation of the Warsaw International Mechanism through provision of finance;

    33.2 Guidelines for a comprehensive approach to climate risk management to be developed;

    33.3 Institutional arrangements under the Convention shall be strengthened to support the implementation of the commitments related to loss and damage under this agreement:

    a. Provisions for establishing a climate change displacement coordination facility that:
        - Provides support for emergency relief;
        - Assists in providing organized migration and planned relocation;
        - Undertakes compensation measures.

    b. Provisions for establishing a clearing house for risk transfer that:
        - Provides a repository for information on insurance and risk transfer;
        - Assists Parties in developing risk management strategies and finding best insurance schemes;
        - Facilitates financial support for rehabilitation.

    Option 2: No new institutional arrangements on loss and damage are required for the purposes of this agreement. The Warsaw International Mechanism to be strengthened separately from the agreement / is sufficient.

Structural suggestions on section E:

Move paragraph 25 into a common chapter relating to institutions.

Include paragraph 25 in a decision.

Move paragraph 25.1 into the finance chapter.

Move paragraphs 26 and 27 into a common chapter relating to commitments.

Coordinate paragraphs 26 and 27 with section K.

Include paragraphs 29 (a–d) in a decision.

Reflect paragraphs 25 to 27 in the agreement text and paragraphs 29 to 31 in a decision.

Merge paragraph 30 with paragraph 31 on institutions.

Include paragraph 30 into a decision.

Loss and damage should be a separate element.

~~*F. Cooperation and support for implementation*~~

Note:

Paragraphs in this section relevant to mitigation have been integrated in the mitigation section.

Paragraphs in this section relevant to finance have been integrated in the finance section.

Paragraphs in this section relevant to institutional arrangements have been integrated in section M (subsection on institutional arrangements).

G. Finance

Guiding principles

34. ***Option 1***: All developed country Parties and other Parties included in Annex II to provide climate finance as a means to meet the goal of staying below the 2 °C temperature increase and to achieve the transformation required to that end and in line with the needs of developing countries, in accordance with their obligations and commitments under Articles 4, paragraphs 3–5 and 7–9, of the Convention, the principles under the Convention, in particular the principles of common but differentiated responsibilities and respective capabilities and equity, noting that the extent to which developing country Parties will effectively implement their commitments will depend on the effective implementation by developed country Parties of their commitments related to financial resources, transfer of technology and capacity-building, acknowledging that the need for support by developing country Parties may change over time and be accommodated under Article 4, paragraph 7, of the Convention, and acknowledging the need for financing for forestry in line with the Warsaw Framework for REDD-plus;

    Option 2: Each Party / All Parties individually or collectively to mobilize climate finance through a diversity of actions from a variety of sources as a means to stay below the long-term temperature limit and to achieve the transformation required to that end, according to and in line with their respective and evolving responsibilities and capabilities / the principles and objectives of the Convention, acknowledging the importance of leadership to be taken by developed country Parties, acknowledging that some Parties need support in order to take action, and acknowledging that the need for support by Parties may change over time or be met with different means of support/ all Parties in a position to do so should provide financial support to Parties in need of support; acknowledging the need for climate-resilient economies and societies.

35.

35.1 The mobilization and provision of finance shall:

a. Deliver adequate and predictable funding for the full and enhanced implementation of the agreement, enhance addressing climate change as part of promoting sustainable development, in particular in developing countries, including through enabling enhanced mitigation and adaptation actions;

b. Encourage low-emission growth, reductions in high-carbon investment, and adaptation needs of developing countries, and climate-resilient development;

c. Support the integration of climate objectives into other policy-relevant areas and activities such as energy, agriculture, planning and transport, national fiscal accounts, development policy and plans in line with country circumstances and according to countries' priorities;

d. Promote continuous efforts to 'climate-proof' investments, including relevant international public finance flows;

e. Enhance addressing climate change in addition to the coordination of development aid, acknowledging that climate finance is to be separate from official development aid;

f. Encourage policy signals by governments / catalyse policy actions by governments and adjustment or improvement of policies;

g. Deliver additional adequate and predictable funding for adaptation, in particular for the implementation of the Cancun Adaptation Framework, for building institutional capacity and appropriate legal frameworks, integrating adaptation into national development policies, and for monitoring and evaluation processes;

h. Advance the implementation / fulfilment of commitments by developed country Parties in terms of finance, technology transfer and capacity-building to enable developing country Parties to implement policies, strategies, regulations and action plans on climate change education, training, public awareness, public participation and public access to information and thus enable effective adaptation and mitigation action by all Parties;

i. Facilitate assistance to developing country Parties for readiness support. / Support readiness for implementation / implementing climate actions.

35.2 Parties / Developed country Parties and other Parties included in Annex II to mobilize and provide financial resources for the enhanced implementation of the Convention under this agreement, in order to / in a manner that:

a. ***Option 1***: Ensures an equal allocation of financing between adaptation and mitigation, ensures an equitable distribution between different regions of developing countries and enhances country ownership in the disbursement of financial resources;

   Option 2: Aims at a balanced approach of a 50:50 allocation of financing for adaptation and mitigation while recognizing the importance of financing for adaptation;

   Option 3: Prioritizes adaptation, with all financing for adaptation to be grant-based / Encourages Parties to prioritize grant-based assistance for adaptation, while recognizing the importance of financing for mitigation;

b. Prioritizes developing country needs and identified country-driven plans, strategies and priorities of all countries, recognizing the importance of enhancing national needs assessments;

c. ***Option 1***: Takes into consideration the need for adequacy and predictability in the flows of funds and the need for clarity of appropriate burden-sharing among developed countries;

   Option 2: Is new, additional, adequate, predictable and sustainable, within budgetary constraints, and acknowledges the need for adequate financial flows mobilized from a variety of sources, public and private, bilateral and multilateral, including alternative sources, in the context of meaningful mitigation action and transparency of implementation;

d. Is flexible and systematically and regularly scaled up / updated;

e. Is results-based / needs-based and delivers the greatest impact possible and targets the effectiveness of mitigation and adaptation action / mitigation and adaptation results that can be measured, reported and verified;

f. Avoids duplication, allows for flexibility, ensures efficiency and transparency and builds a partnership among governments, development partners and the private sector to invest in a low-emission and climate-resilient future;

g. Encourages South–South cooperation which is voluntary, free of monitoring and can be supplementary / complementary, but not substitute commitments of Parties included in Annex I to the Convention while acknowledging that South–South cooperation is not a commitment of Parties under the Convention;

h. Recognizes developing countries' / all Parties' investments in supporting transformational change as part of their contributions;

i. Applies lower thresholds for receiving support for actions, with clear, transparent and quantifiable targets that go beyond 'business as usual';

j. Is capable of adapting dynamically to changing realities and future developments and needs, including in respect to climate finance, in line with the provisions and principles of the Convention, in particular the principle of common but differentiated responsibilities / reflecting evolving capabilities and responsibilities;

k. Takes into account the urgent and immediate needs of developing countries that are particularly vulnerable to the adverse effects of climate change / Prioritizes the specific needs and special circumstances of the most particularly vulnerable countries, including landlocked countries, recognizing the special circumstances of LDCs and SIDS, giving priority to countries with least capabilities and/or ensuring a fair geographical allocation of resources, while ensuring that the importance of providing support to other developing countries is in no way diminished;

l. Uses the diversity of available channels and instruments under the Convention so as to limit the proliferation of finance in order to increase its efficiency and effectiveness and encourage the accountability and transparency of the UNFCCC in the provision of financial support, the mobilization of climate finance and the shift towards climate-friendly investments;

m. Pursues a gender-sensitive and country-driven approach;

n. Targets the drivers of climate change;

o. Encourages Parties to build effective enabling environments and provides recognition of the importance of implementing low-carbon, climate-resilient development strategies and NAPs;

p. Encourages Parties to take steps to eliminate public incentives for high-carbon investments;

q. Recognizes that climate finance flows are not limited to flows from developed to developing country Parties;

r. Collectively exceeds the aggregate ambition of individual commitments / contributions;

s. Develops and improves enabling environments for the enhanced mobilization of support;

t. Is quantifiable, comparable and transparent;

u. Establishes links and builds synergies between mitigation and adaptation actions;

v. Enhances / catalyses international cooperative initiatives and recognizes their contribution to assisting Parties' implementation of this agreement.

36. All Parties to cooperate in the implementation of this agreement in order to:

a. Support the enhanced ambition of all Parties, through the provision of support from Annex II Parties to developing country Parties;

b. Enable Parties' best efforts based on their respective capabilities, foster country ownership and achieve sustainable development.

37. Efforts of subnational and local governments, subregional entities and the private sector to be recognized.

Anchoring institutions under the legal agreement

38. The Financial Mechanism shall serve as the financial mechanism of the 2015 agreement:

a. The GCF shall be the main financial entity under the new agreement and/or anchored in the new agreement and/or strengthened;

b. The SCF shall assist the governing body of the agreement;

c. Coordination to be further enhanced among contributors and between institutions.

Option 1: This will also apply to the operating entities of the Financial Mechanism and funds established under the Convention and its Kyoto Protocol. All the rules and guidelines developed by the COP and the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol in relation to the operation of the Financial Mechanism, its operating entities and associated funds shall apply mutatis mutandis to the financial mechanism of this agreement:

a. The GCF shall be strengthened, including regarding funding, as follows:

- Annex I Parties / Developed country Parties to provide 1 per cent of gross domestic product per year from 2020 and additional funds during the pre-2020 period to the GCF;
- Annex II Parties to provide a list of specific amounts / percentages reflecting the required share of climate finance to be provided to the GCF, subject to review;
- All countries in a position to do so to provide funding to the GCF;
- Funding for the GCF to be drawn mainly from public sources.

b. Other funding mechanisms serving the agreement shall include:

- The Adaptation Fund:
  - To be part of the post-2015 climate finance architecture and/or to operate under the new agreement under the guidance of the governing body in relation to activities developed under the agreement;
  - To be enhanced and included under the GCF as an adaptation window, be inscribed in the new climate regime and defined in the financing sphere of the agreement;
- Institutional arrangements for REDD-plus finance;
- The LDCF, to provide support to the LDCs for adaptation action;
- The SCCF, to be anchored in the agreement.

Option 2: No further provisions.

Proposals for decisions related to anchoring institutions under the agreement

- Clear roles should be agreed on the two existing operating entities of the Financial Mechanism of the Convention and coherence should be achieved in climate finance channelled through other financing institutions;
- The COP to be given the authority to adjust institutional settings, to take decisions on consolidating and coordinating institutions and processes, and/or to give guidance to the operational entities as needed, at a later stage;
- Need for the simplification, improvement and rationalization of access, including direct access, especially for the LDCs and SIDS; and/or the harmonization of approval and accreditation processes between various channels and institutions leveraging potential non-climate-specific financing mechanisms and institutions; and/or the operation of all funds under the Convention to be transparent, competitive and based on rules, with operating criteria underpinning those rules that are compatible with the requirements of private investors, in order to effectively stimulate co-investment; and/or information on how all disbursements include provisions for 'climate proofing' measures;
- The Financial Mechanism must continue to be main source of financing;

- The replenishment of the Financial Mechanism and its operating entities to be linked to IPCC scientific assessments;
- Need to establish how the operating entities of the Financial Mechanism will work to implement the finance provisions of the new agreement and how the financial provisions will work with respect to other bodies or mechanisms under the Convention;
- The SCF shall assist the governing body of this agreement and be further strengthened:
  - By enhancing its work on coherence and coordination and on rationalizing the Financial Mechanism.
- Regarding the GCF:
  - The establishment of: a window for REDD-plus; and/or for loss and damage;
  - Need for: improved and prioritized access for the LDCs and SIDS and/or arrangements between thematic bodies of the Convention and the GCF to be strengthened;
  - The GCF to operate under the guidance of the governing body in relation to activities developed under this agreement, and/or to support mitigation readiness activities in developing countries, and/or to capitalize on its knowledge of existing funds and increase its role by helping to finance some of the pipeline projects of those funds;
  - The governing body of this agreement to: explore further options for simplifying the procedures for accessing funds from the GCF; and/or develop, jointly with the COP, specific additional modalities for the operation of the GCF with respect to activities developed under this agreement.
- Decision to address additional rules of the Financial Mechanism and institutions in supporting the implementation of the legal agreement, where appropriate.

Addressing the scale of resources

39. Climate finance to be scaled up to provide the financing, access to technology and capacity-building necessary to meet the goal of limiting the temperature increase to below 2 °C, in line with the needs of developing countries.

40. The importance of providing clarity on the level of support, in particular financial support, that will be provided to developing countries to allow for the enhanced implementation of the Convention, in particular with regard to adaptation, to be recognized as a crucial element in creating the necessary conditions for the enhanced participation of developing countries in the global effort to combat climate change and adapt to its adverse effects.

41. ***Option 1***: The provision of finance to be based on a floor of USD 100 billion per year:

    a. Based on an ex ante process to commit quantified support commensurate with the required effort reflected in the adaptation and mitigation goals / relative to the required effort and in line with developing countries' needs;

    b. Based on clear burden-sharing arrangements among Annex II Parties to identify the flows of financial support from developed countries, including through the application of an assessed scale of contributions from developed countries;

    c. Including aggregate and enhanced specific / individual commitments / contributions by Annex II Parties, complemented by other Parties in a position to do so;

    d. Based on a road map with annual targets for public funding in the post-2020 period or pathways with annual expected levels of climate finance towards achieving short-term quantified goals;

    e. Based on an agreed percentage formula for the calculation of the contributions of Annex I Parties and differentiated developing country contributions based on GDP or other indicators.

    Option 2: Agreement not to specify individual / quantified commitments, quantified targets or specific indicators for the post-2020 period.

42. A short-term collective quantified goal that defines the expected, scaled-up climate finance level for the post-2020 period should be determined in order to enhance the predictability of the provision of climate finance, indicating specific levels of public sources to be provided.

Contributions under the legal agreement

43. In the context of common but differentiated responsibilities and respective capabilities, Annex II Parties have the principle and main responsibility for providing support, including financial resources, for the enhanced implementation of low-emission and climate-resilient development in developing countries, while ensuring the sustainability, predictability and additionality of finances.

44. The contribution of resources under this agreement to consider predictable financial contributions by developed country governments; increasing options for leveraging a greater share of the carbon market-related proceeds, including options for carbon pricing and raising contributions via alternative and innovative sources of finance.

45. A collective goal for support to be achieved by all Parties in order to transition to a world in which all investments are directed at resilient and low-emission actions, and where finance, technology transfer and capacity-building that promote low-emission and resilient actions prevail.

46. ***Option 1***: The enhancement of enabling environments, with respect for countries' national prerogative to choose their domestic climate policies, to be a commitment of all Parties, through:

    a. Enhanced national regulatory frameworks, including policies and measures;

    b. The dedication of sufficient domestic resources by countries seeking support;

    c. Putting in place conditions to mobilize, attract and absorb climate-related investments;

    d. The provision of a price signal for emission reductions, including through payments for verified emission reductions.

    Option 2: Agreement not to specify the enhancement of enabling environments as a commitment or obligation of Parties.

47. Financing for adaptation to be provided in the form of multilateral and/or bilateral financing, including via:

    47.1 A balanced allocation between adaptation and mitigation, or a 50:50 balance between the support provided for adaptation and mitigation, or at least 50 per cent of support to be provided for adaptation activities;

    47.2 The use of levies for adaptation funding from any market-based mechanisms;

    47.3 Financial risk management instruments;

    47.4 The Adaptation Fund, the LDCF and the SCCF, and including through support to enable the mobilization of private-sector financial flows for adaptation investments, with the GCF providing assurance of support for countries' adaptation efforts;

    47.5 ***Option 1***: Diverse sources, including private sources, engaged in the provision of financing for adaptation, with public finance to constitute the key instrument in increasing support for adaptation:

        a. Identification of sources and prioritization of public funding, as well as increase of private sector financial contributions for adaptation;

        b. Encourage the International Civil Aviation Organization and the International Maritime Organization to develop a levy scheme to provide financial support for the Adaptation Fund.

        Option 2: Public sources primarily, with supplementary funding to be drawn from private / alternative sources.

48. Support / New and additional finance, independent of adaptation budgets, to be provided for the financing and operationalization of the Warsaw International Mechanism.

49. Support provided to developing country Parties for technology development and transfer and support provided to the Technology Mechanism to ensure the effective implementation of technology to be channelled primarily through the GCF / the operating entities of the Financial Mechanism, taking into account the roles of the public and private sectors in mobilizing finance for technology / primarily from public sources, with supplementary funding to be drawn from private sources.

50. Funding for capacity-building as well as measures to develop, adopt and implement policies, strategies, regulations and/or action plans on climate change education, training, public awareness, public participation and public access to information in developing country Parties:

    50.1 To be provided by developed country Parties and other Parties and organizations in a position to do so, in an adequate and predictable manner;

50.2 To be primarily channelled through the Financial Mechanism, taking into account the potential role of the private sector in supporting capacity-building and the need for enhanced coordination among donors and institutions.

51. Funding for REDD-plus to be adequate, predictable and sustainable, with financing continuing to be provided, including via Annex II Parties and Parties in a position to do so, private and non-market-based sources and results-based finance.

52. Parties in a position to do so / Annex II Parties and other Parties in a position to do so to provide Parties in need of assistance / developing country Parties with financial and technical and capacity-building support in order for them to efficiently and effectively fulfil the reporting requirements of this agreement.

Sources of finance

53. Financial resources to be mobilized and provided from:

Option 1: Primarily public sources, with supplementary funding to be drawn from private / alternative sources:

a. Stressing that public sources are the main source of finance, the scale of resources needed and the type of investments required, governments to work more closely together with the private sector;

b. Developed country Parties shall incentivize the private sector to provide funding to developing countries;

c. Different sources to be considered on the basis of clear criteria in order to avoid incidence on developing countries, and the sustainability, predictability and additionally of sources to be clarified.

Option 2: A wide variety of sources, including public, private and alternative sources, recognizing the need for a diversity of sources and instruments to suit recipients' changing economic circumstances / with different types of financing for different activities and public sources for specific areas, given the limited potential for private investment, in particular in the most vulnerable countries and LDCs.

53.1 With regard to private and alternative finance:

a. All Parties to commit to cooperate in leveraging private finance and/or to mobilize / utilize public funds and means to facilitate and encourage private investment consistent with their capabilities, recognizing that private-sector financing is complementary to, but not a substitute for, public-sector financing where public finance is needed:

- A mechanism to attract the private sector to invest in projects, with clear definitions, respective roles and guidance on the mechanism, to achieve a useful balance of public and private sources, ensuring reasonable returns and full transparency;
- Efforts undertaken by export credit agencies to help investors manage risk;
- A clear signal to the private sector at all levels for it to contribute to the mobilization of climate finance and to reorient financial flows and trigger the required investments and involvement, including of local private sectors;
- Public-sector finance to catalyse and avoid crowding out private-sector investments, ensuring that private-sector investment is not displaced, with the efficient use of public resources and effective public policies to be the key focus of post-2020 cooperative efforts among middle- and higher-income countries;
- Need for strong public–private partnerships, which should be subsidized and incentivized;
- Be strategic and in line with national priorities and laws and be profitable for the private sector;
- Enhanced enabling environments for private-sector investment in adaptation;
- The governing body shall develop modalities for leveraging and freeing up private finance to support the implementation of this agreement.

b. A tax on oil exports from developing to developed countries to be established;

c. An international renewable energy and energy efficiency bond facility to be established;

d. The phasing down of high-carbon investments and fossil fuel subsidies.

Structural suggestions on section G:

Include paragraphs 48 to 51 as part of a decision.

Include paragraphs 35.1 and 35.2 as part of a decision.

Proposals to move provisions on MRV of support to the finance section.

H. Technology development and transfer

General

54. ***Option 1***: All Parties to strengthen cooperative action to promote and enhance technology development and transfer, including through the Technology Mechanism / institutional arrangements for technology established under the Convention and through the Financial Mechanism, in order to support the implementation of mitigation and adaptation commitments under this agreement;

    Option 2: Parties, consistent with the principles and provisions of the Convention, including Article 4, paragraphs 1, 3 and 5, / in accordance with their common but differentiated responsibilities, to strengthen cooperative action to promote and enhance technology development and transfer and better facilitate the implementation of the Convention, including through the Technology Mechanism / institutional arrangements for technology established under the Convention and through the Financial Mechanism / by enhancing the provision of support by developed country Parties, in order to support the implementation of mitigation and adaptation commitments under this agreement;

    Option 3: Parties, consistent with the principles and provisions of the Convention, including Article 4, paragraph 5, reflecting the evolving economic realities, to strengthen cooperative action to promote and enhance technology development and transfer, including through the Technology Mechanism / institutional arrangements for technology established under the Convention and through the Financial Mechanism.

55. *Placeholder:* Global goal on enhanced action on technology development and transfer.

Commitments

56. ***Option 1***: Commitments in relation to technology development and transfer to include the following:

    56.1 Developed country Parties to undertake steps to address barriers to accessing technology and to establish and strengthen their necessary policy frameworks to facilitate the removal of barriers and enable and accelerate technology development and transfer to developing country Parties; and to leverage enhanced support from the private sector for technology development and transfer to developing country Parties; and to provide financial, human resources, institutional and technical support for technology development and transfer to developing country Parties;

    56.2 Developing country Parties, with the support of developed country Parties, to undertake steps to address barriers to accessing technology and to establish and strengthen their national structures, policy frameworks, institutions and capacity, in order to enable and accelerate the endogenous capacity for the absorption, development and transfer of technologies in developing countries / endogenous technology development and transfer, attract investments and enhance country ownership and innovation;

    56.3 All Parties, in accordance with the principles of and obligations under the Convention, to establish means to facilitate access to and the deployment of technology, while promoting and rewarding innovation in adaptation and mitigation technologies / environmentally sound technologies:

    Option (a):

    a. In accordance with Article 4 of Convention, developed country Parties to provide financial resources to address barriers caused by intellectual property rights (IPRs) and facilitate access to and the deployment of technology, including inter alia, by utilizing the Financial Mechanism and/or the establishment of a funding window under the GCF / the operating entities of the Financial Mechanism;

    b. An international mechanism on IPRs to be established to facilitate access to and the deployment of technology to developing country Parties;

    c. Other arrangements to be established to address IPRs, such as collaborative research and development, shareware, commitments related to humanitarian or preferential licensing, fully paid-up or joint licensing schemes, preferential rates and patent pools.

    Option (b): Parties recognize that IPRs create an enabling environment for the promotion of technology innovation in environmentally sound technologies;

    Option (c): IPRs are not to be addressed in this agreement.

    56.4 Developing country Parties, with the support of developed country Parties, to conduct an assessment of their technology needs, on the basis of national circumstances and priorities, with a view to ensuring nationally

determined and environmentally, economically and socially sound resulting project proposals and to effectively implementing the outcomes of such an assessment supported by developed country Parties, in order to support the implementation of this agreement:

- Parties to strengthen the process of technology needs assessment (TNAs) and enhance the implementation of the outcomes of the TNA process;
- Align TNAs more closely with bankable finance projects / Improve TNAs to result in implementable projects;
- TNAs could be linked to other processes under the Convention, such as NAMAs and NAPs; TNA process should be elaborated to address developments arising from the operationalization of this agreement.

56.5 All Parties, enabled by Annex II Parties / led by developed country Parties, to accelerate global collaboration on the research, development and demonstration of technologies:

a. Support, including financial and intellectual support, to accelerate the research, development and demonstration of technologies, including endogenous technologies, to be provided by developed country Parties to developing country Parties;

b. Modalities for a global collaborative programme on the research, development and demonstration of technologies to be established, attracting and integrating relevant stakeholders.

Option 2: No commitments on technology in the agreement.

Institutional arrangements

57. Institutional arrangements for technology development and transfer under the Convention shall support Parties in implementing their commitments / contributions under this agreement:

57.1 Anchoring:

Option 1: The Technology Mechanism established under the Convention, including the TEC and the Climate Technology Centre and Network (CTCN), shall serve this agreement by facilitating enhanced action on technology development and transfer in order to achieve the objectives of this agreement;

Option 2: The institutional arrangements for technology established under the Convention shall serve this agreement by facilitating enhanced action on technology development and transfer in order to achieve the objectives of this agreement.

57.2 Guidance to and strengthening of the Technology Mechanism / institutional arrangements:

The governing body may provide further guidance to and/or strengthen the Technology Mechanism / institutional arrangements for technology established under the Convention serving this agreement, and the guidance provided by the governing body shall not conflict with the guidance provided by the COP.

Option 1: Specific provisions on strengthening:

a. The TEC and the CTCN / Technology Mechanism of the Convention shall support the operationalization and delivery of the commitments related to technology development and transfer in this agreement, under the Convention:
   - Include provisions on accounting;
   - Take into account the specific needs of developing countries and countries with special circumstances of Africa, LDCs and SIDS.

b. The Technology Mechanism shall enhance cooperation and synergy with other institutional arrangements under and outside the Convention and stakeholders, as well as the coherence and effectiveness of technology action and initiatives under the Convention:
   - Establish linkages between the Technology Mechanism, the Financial Mechanism and capacity-building institutions;
   - The Poznan strategic programme on technology transfer to be linked to and/or guided by the Technology Mechanism;
   - Provisions or measures related to other technology initiatives or regional centres;
   - Enhance the role of the private sector to support the implementation of the Technology Mechanism;
   - Facilitate the role of public research and development, incentives for commercial research and development, the development of technologies and the reaching of economies of scale.

c. The governing body shall conduct a periodic assessment of the effectiveness and adequacy of the Technology Mechanism / institutional arrangements for technology development and transfer.

Option 2: No specific provisions on guidance to and/or strengthening of the Technology Mechanism in the agreement.

Structural suggestions on section H:

Include paragraph 57.2 (option 1) in a decision.

I. Capacity-building

General

Option 1:

58. The objective of capacity-building should be to enable developing country Parties / all Parties to identify, design and implement adaptation and mitigation actions and to enable domestic development and absorption of technologies / to enhance the capacities of national governments to be able to absorb technology and finance for the implementation of the Convention.

59. Capacity-building to be guided by the following:

a. The framework for capacity-building in developing countries established under decision 2/CP.7;

b. A formal, structured, clear, predictable, effective, coordinated, demand-driven / country-driven, sustainable and long-term and gender-responsive way;

c. Clear and predictable targets and outcomes;

d. Responding to national needs and fostering country ownership:

- Building on existing provisions and lessons learned on capacity-building under the Convention;
- Using the INDC preparation and measurement, reporting and verification (MRV) processes;
- Supporting preparatory and readiness programmes, including on climate finance;
- Until developing country Parties have acquired the capacity to fully implement climate change actions under the Convention / Developing countries will enhance their climate change actions according to the means of implementation provided by Annex I and Annex II Parties under the Convention.

e. Responding to needs at the national, subnational and local levels:

Option (a): Taking into account the potential role of the private sector in supporting capacity-building and the need for enhanced coordination among donors and institutions;

Option (b): Public sector bears the main responsibility, and private funding should only be complementary;

Option (c): No provision necessary.

f. Ensuring that capacity-building is effective, demand-driven / country-driven and sustainable over the long term.

60. Capacity-building to be enhanced through:

a. The development of climate policies;

b. The mobilization of private sector capital and public engagement;

c. The promotion of public awareness and education;

d. The strengthening of domestic institutions and the creation of enabling environments;

e. Integrating capacity-building activities into mitigation and adaptation programmes / into all other elements.

Option 2: No general provisions on capacity-building.

Commitments

61. ***Option 1***: The developed / Annex I Parties and other Parties in a position to do so should cooperate to enhance the capacity of developing countries to support the implementation of their contributions under the agreement based on the principles and provisions of the Convention and other Parties in a position to do so to cooperate to enhance the capacity of developing country Parties in all areas of climate change action, to support the implementation of their commitments / contributions under this agreement and to foster South–South and triangular cooperation schemes;

Option 2: No commitments on capacity-building in the agreement.

Institutional arrangements

62. The institutional arrangements established under the Convention shall enhance and intensify their work on capacity-building:

62.1 The Durban Forum on capacity-building established by decision 2/CP.17 / the institutional arrangements on capacity-building established under the Convention shall serve this agreement by:

a. Enhancing the monitoring and review of the effectiveness of capacity-building;

b. Identifying and addressing capacity gaps in developing countries;

c. Enhancing the coordination between institutions established under the Convention and this agreement as it relates to their work and mandates on capacity-building:

- The governing body may provide further guidance to the Durban Forum and assign specific functions, as appropriate;
- The governing body shall periodically review the commitments of developed country Parties to provide capacity-building support to developing country Parties and take appropriate action, which may include the adjustment of such commitments in accordance with the identified national needs and priorities of the developing country Parties;
- The governing body shall regularly review the outcomes of the Durban Forum and take appropriate action.

63. ***Option 1***: An international capacity-building mechanism is hereby established:

63.1 The purpose of the international capacity-building mechanism under this agreement, funded through the Financial Mechanism of the Convention and linked to technology- and adaptation-related institutions established under the Convention, shall be to enhance the capacity of developing country Parties to plan and implement mitigation and adaptation actions, including human skills development for the strengthening of domestic institutions, technology innovation and the development of endogenous technologies, and to make a structured assessment of the capacity needs of developing countries and match them with support.

63.2 The international capacity-building mechanism shall comprise:

a. A capacity-building committee with the following functions:

- MRV of support received for capacity-building against needs identified by developing country Parties;
- Facilitation of the effective implementation of capacity-building interventions at the national and regional levels;
- Provision of normative guidance on capacity-building related issues concerning this agreement to inform other institutions and mechanisms established under the Convention serving this agreement;
- Promotion of coherence between relevant institutions and mechanisms established under the Convention and this agreement.

b. An evaluation mechanism with the function:

- To assess the effectiveness of the delivery of capacity-building.

c. Regional capacity-building centres:

- To facilitate building capacity at the national and regional levels.

d. An institute for capacity-building to operate as a consortium of tertiary institutions in all major regions of the world:

- To build capacity in developing countries as a means of strengthening the ability and effectiveness of mitigation and adaptation actions.

63.3 The governing body shall adopt modalities and procedures for the operation of the international capacity-building mechanism. The international capacity-building mechanism should become operational as soon as possible after 2015 to prepare all countries for the implementation of this agreement by 2020.

Option 2: No provisions on the establishment of new institutions;

Option 3: Strengthening and improving existing institutions;

Option 4: Enhance the role of the private sector in the delivery of capacity-building.

Structural suggestions on section I:

Include references to capacity-building in all other sections.

Include preambular recital on capacity-building and details in decisions.

Include paragraph 62 in a decision.

J. Transparency of action and support

General

64. ***Option 1***: A transparency framework, applicable to all Parties and differentiated between developed and developing countries, under the Convention and in accordance with previous decisions of the COP, shall promote transparency of action and support by providing information on the implementation of each Party's commitments / contributions in an efficient and flexible manner, in order to:

    a. Enhance clarity, comparability between developed countries, accountability and mutual trust and to promote ambition / progressive enhancement;

    b. Facilitate the tracking of progress in the implementation of commitments / contributions;

    c. Ensure that commitments / actions and provision of support by Annex II Parties are implemented and complied with and verified through a robust verification system, and facilitate the comparison of MRV of all types of support received with the needs expressed and identified by developing country Parties;

    d. Facilitate / Ensure the use of mitigation outcomes resulting from international / national market-based mechanisms in the accounting of each Party's commitments / contributions;

    e. Avoid double counting;

    f. Ensure the environmental integrity of this agreement.

    Option 2: A single / common transparency framework, applicable to all Parties, shall promote transparency of action and support by providing information on the implementation of each Party's commitments / contributions in an efficient and flexible manner, in order to:

    a. Enhance clarity, comparability, accountability and mutual trust, and promote ambition;

    b. Facilitate the tracking of progress in the implementation of commitments / contributions;

    c. Promote the implementation of action and support, and ensure that efforts are verified through a robust verification system;

    d. Facilitate the use of mitigation outcomes resulting from international market-based mechanisms in the accounting of each Party's commitments / contributions;

    e. Avoid double counting;

    f. Ensure the environmental integrity of this agreement;

    g. Provide the necessary flexibility to Parties through the use of tiers or 'opt-out' provisions.

    Option 3: All Parties shall promote transparency of action and support by providing information on the implementation of each Parties' commitments under the Convention, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, in order to:

    a. Ensure the comparability and accountability of the quantified economy-wide emission reduction targets of developed country Parties in a measurable, reportable and verifiable manner;

    b. Ensure that developing country Parties' support-related commitments are implemented, compiled with and verified through a robust accounting, reporting and verification system;

    c. Facilitate the clarity of progress made by developing country Parties on their implementation of actions for addressing climate change and on the support received from developed country Parties.

65. ***Option 1***: The transparency framework shall encompass MRV of emissions and removals and the accounting of commitments / contributions, including those related to support, and shall be based on agreed rules / be based on existing MRV arrangements under the Convention and / be guided by:

    Option (a):

    a. Article 12 of the Convention;

b. Taking into account the differing national circumstances / common but differentiated responsibilities / the unique circumstances / and respective capabilities of Parties;

c. Accommodating different contributions and countries' differing capacities; and/or providing for differentiation in reporting and the common international review of reports;

d. Avoiding imposing onerous burdens on poor and vulnerable countries or developing countries and, in particular, the LDCs and SIDS, with respect to support received for adaptation, capacity-building and access to and adoption of appropriate technologies;

e. Recognizing that the transparency framework will evolve, building on existing decisions / experience with existing MRV arrangements;

f. Tracking post-2020 commitments;

g. Ensuring transparency, accuracy, completeness, comparability and consistency;

h. Maintaining or improving levels of transparency over time;

i. Building countries' capacities over time and institutionalizing reporting capacity.

Option (b):

a. The principles and provisions of the Convention;

b. Taking into account Parties' common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances;

c. Consistent with the level of support provided for developing countries;

d. Recognizing that the transparency framework will evolve, building on existing decisions.

Option 2: The transparency framework shall encompass reporting through biennial communications, a technical expert review of the submitted biennial communications and a facilitative examination of the implementation of efforts, and shall be based on agreed rules.

66. The transparency framework shall be:

Option 1: Built on the existing MRV arrangements under the Convention:

a. Developed country Parties / Developed country Parties and other Parties undertaking quantified emission reduction commitments should report information related to their actions and provision of support to developing countries in accordance with the provisions of the Convention and relevant decisions of the COP in their national communications, biennial reports and annual inventory reports. All of that information will be subject to the international assessment and review (IAR) and international expert team review), as well as to a compliance assessment for Annex I Parties that are also Parties to the Kyoto Protocol;

b. Developing country Parties / Parties not undertaking quantified emission reduction commitments / Developing country Parties, consistent with their obligations under the Convention, their capabilities and the level of support received from developed country Parties, should report information on their actions and support received in accordance with the relevant decisions of the COP in their national communications and biennial update reports (BURs), and the BURs will be subject to international consultation and analysis (ICA).

Option 2: A common framework with common MRV provisions applicable to all Parties, built on the existing MRV system that is fit for purpose and offers appropriate flexibility / offers flexibility for developing country Parties in terms of the level and depth of the application of the common MRV provisions in relation to:

a. The frequency of reporting;

b. The broad categories of information to be reported, namely:

- National inventories of emissions and removals;
- Progress made towards the achievement of mitigation commitments / contributions;
- Monitoring and evaluation of adaptation;
- Tracking the delivery of, and the outcomes achieved through, support.

c. The consideration of reporting:

- Expert review;
- A facilitative, multilateral process.

Option 3: A single system with common MRV provisions applicable to all Parties from 2020;

Option 4: Based on Articles 10, paragraph 2(a) and (b), and 12, paragraphs 1–3, of the Convention:

a. Enhanced procedures for comparability for Annex I Parties;

- More frequent reporting, standardized format, common accounting framework with common base year and expressed in terms of CO_2 eq, projections of emission trajectories / pathways.

b. Current procedures set up under decisions 1/CP.16 and 2/CP.17 for non-Annex I Parties.

Option 5: All Parties shall, on the basis of self-differentiation and national capacity, report information through existing institutions, with no backsliding, and follow the procedural guidelines and provisions provided in the following review methods based on the following tiers:

a. Monitoring, review and verification under the Convention;

b. Monitoring, review and verification under the Cancun Agreements;

c. Monitoring, review and verification under the Kyoto Protocol.

Commitments

67. ***Option 1***: Each Party to provide, through their biennial communications, verifiable, transparent, consistent and complete, accurate and comparable information, in accordance with previous decisions of the COP, on the implementation of its commitments / contributions / actions, including in relation to mitigation, adaptation, finance, technology development and transfer and capacity-building;

    Option 2: All Parties commit to participating in an agreed, unified transparency system and to continuously improve transparency;

    Option 3: Each developed country Party shall provide information on: its quantified economy-wide emission reduction target, its policies and actions for implementing that target, adaptation actions, research, development and demonstration actions related to climate-friendly technologies and capacity-building actions, as well as other relevant information, in order to ensure the provision of consistent, transparent, comparable, accurate and complete information by developed country Parties.

68. All Parties / Annex II Parties / Parties in accordance with their common but differentiated responsibilities, to ensure transparency of support:

    a. MRV of support provided to be enhanced on the basis of national communications, biennial reports, IAR and Kyoto Protocol rules using common but differentiated templates and drawing on the work of the SBSTA on methodologies for the reporting of financial information by Annex I Parties;

    b. Developing countries to provide information on support received and its use, recognizing the special circumstances of countries, ensuring that no additional reporting burdens are imposed on developing countries;

    c. Annex II Parties and Parties in a position to do so to provide biennial reports on adaptation support, indicating the level of support that they are providing to developing country Parties, in particular the LDCs, SIDS and countries in Africa, to inform a regular review by the governing body in line with science;

    d. International financial institutions are invited to provide information on how their development assistance finance incorporates 'climate proofing' measures in all forms of support;

    e. Each Party to provide information on support provided and received, in line with its national circumstances.

Rules and modalities

69. ***Option 1***: The governing body shall elaborate the rules related to transparency of action and support, including MRV, as well as related to accounting, in particular rules on the use of market mechanisms and to the land sector in relation to mitigation commitments / contributions, which:

    a. After gathering experience with the agreed transparency system and assessing whether improvement is needed, adjust / enhance / ensure the development of the existing MRV arrangements and accounting rules, building on the experience of existing MRV arrangements, to fit the objectives and purposes of the agreement;

    b. Ensure harmonization and coordination of existing data systems as well as methodological consistency and commonality in defining and tracking the commitments / contributions;

    c. ***Option (a)***: Apply IPCC greenhouse gas inventory guidelines and common metrics agreed under the Convention;

       Option (b): Use common metrics and methodologies adopted by the IPCC and agreed by the COP for the estimation of GHG emissions and removals;

d. Recognize the importance of greenhouse gas emissions by sources and removals by sinks resulting from land-use change and forestry activities for understanding mitigation contributions and progress in achieving targets, commitments and implementing actions;

e. ***Option (a)***: Recognize the use of market mechanisms in relation to mitigation commitments / contributions;

Option (b): Recognize the use of the mechanisms defined in Articles 6 and 12 of the Kyoto Protocol and mechanisms defined in the Convention in relation to mitigation commitments.

Recognize the use of market activities in relation to mitigation commitments if they meet standards, to be defined, that deliver real, permanent, additional and verified mitigation outcomes, avoid double accounting of effort, achieve a net decrease and/or avoidance of greenhouse gas emissions and are in conformity with these standards;

f. Recognize the importance of accounting of support for adaptation and means of implementation;

g. Use comparable accounting mechanisms for support based on common templates / methodologies and common methodology for MRV for developed countries / Annex II Parties;

h. Place greater emphasis on effectiveness of support and include better provisions for reporting on the use of international support and results achieved with support;

i. With respect to the provision and receipt of finance:

- Include / enhance information, consistent with previous decisions of the COP, on support provided and received, including on: delivery, use and impact, sources, scale, channels, instruments, and on South–South cooperation;
- Provide transparency on the levels of financing, what financing is used for, which countries are benefiting, and whether funds are new and additional and outcomes achieved through:
  - *Option 1*: Accounting rules for: mitigation and adaptation actions and for financial support, as well as public and private resources invested;
  - *Option 2*: Accounting rules for Annex II Parties with regard to support.
- Be enhanced based on annual reporting on delivery of climate finance by developed country Parties;
- Address the need for a common agreed definition of climate finance and inconsistencies on climate finance data:
  - Providing clarity on what type is most appropriate for what action;
  - Building on the work done by the Organisation for Economic Co-operation and Development Research Collaborative and the SCF on methods for measuring and tracking private climate finance / Building on the work of the SBSTA;
  - As outlined in the MRV proposal from Ecuador.[4]

j. With respect to the monitoring and reporting of support from developed country Parties / Annex II Parties to developing country Parties on enhanced action on technology development and transfer:

- Overseen by the TEC / Facilitated by the TEC / Technology Mechanism;
- Develop common format and methodologies for technology support reporting.

k. With respect to the effectiveness of capacity-building support:

- Based on the impact and knowledge created in developing country Parties against performance indicators at the national level and/or by a committee on capacity-building;
- Be conducted against needs identified by developing country Parties;
- Include an assessment of the effectiveness of capacity-building activities based on performance indicators at the international level;
- Supported by the Durban Forum on capacity-building and the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention.

Option 2: The governing body shall elaborate the rules related to transparency of action and support, including MRV as well as accounting, which:

a. Develop methodologies on the accounting of support on finance, technology development and transfer and capacity-building provided by developed country Parties to developing country Parties, including common metrics on the climate finance and quantifiable progress indicators on technology transfer and capacity-building support provided by developed countries;

[4] FCCC/AWGLCA/2012/CRP.1.

b. Revise and improve the common reporting format on financial support available and provided by developed countries to developing countries;

c. Develop a common reporting format on the support for technology development and transfer and capacity-building provided by developed country Parties to developing country Parties;

d. Revise the modalities and procedures of IAR in order to strengthen the review on the progress of provision of financial, technological and capacity-building support by developed country Parties to developing country Parties;

e. Establish a long-term finance channel under the GCF or the Global Environment Facility to build MRV capacity of developing countries on a continuous basis.

Option 3: The governing body shall elaborate the guidelines related to transparency of action and support, by:

a. Tailoring the post-2020 transparency arrangements to promote its objective;

b. Developing guidelines for biennial communications regarding;

c. National circumstances:

- The national inventory report of emissions and removals;
- A description of nationally determined contribution;
- Progress in achievement of the NDC, including mitigation actions and their effects, estimates of emissions from the land sector, and the use of units from international market-based mechanisms;
- Projections;
- Provision of support, including on the provision of finance, technology transfer and capacity-building;
- Progress in assessing climate risks and vulnerabilities, and in enhancing adaptation action, including through national adaptation planning processes.

d. Using common reporting templates wherever applicable and beneficial for enhancing transparency;

e. Elaborating on the following:

- Parties to include all major emission sources and sinks, pools and gases in their contribution;
- For major sources and sinks, pools and gases that are not included, Parties to include an explanation for their exclusion, and to strive to include these over time;
- Parties to use the most relevant IPCC guidance and guidelines, as determined by the COP;
- Parties not to change their accounting approach or methodologies or baseline during the time frame, except in the case of technical corrections;
- Parties to have projected baselines transparently assessed;
- Parties that use market-based approaches to meet standards that deliver real, additional, verifiable and permanent emission reductions, avoid double counting of effort and result in a net mitigation benefit.

f. Recognizing the importance of greenhouse gas emissions by sources and removals by sinks resulting from land-use change and forestry activities;

g. Developing guidelines to assist Parties in assessing national climate change impacts, vulnerability and adaptation options;

h. Developing guidelines for the technical expert review of Parties' biennial communications;

i. Developing guidelines for a facilitative examination of Parties' progress towards their nationally determined contributions;

j. With respect to the provision and receipt of support and international cooperation, develop guidelines that:

- Elicit information on support provided and received, including on: delivery, use and impact, sources, scale, channels, and instruments;
- Provide transparency on the levels of financing, what financing is used for, which countries are benefiting, and whether funds are new and additional;
- Place greater emphasis on effectiveness of support and reporting on the use of international support and results achieved with support;
- Recognize that a variety of types may be appropriate;
- Consider the ongoing work under the SCF and the work of relevant bodies outside the Convention.

Structural suggestions on section J:

Transparency of support to be addressed in the context of support, transparency of mitigation in the context of mitigation.

Divide into three sub-sections: (1) commitment to participate in a single transparency system; (2) the mechanics, or component parts, of the system; and (3) the guiding principles for the system.

Restructure paragraphs 67 and 68 into three sub-sections: transparency of actions by developed country Parties; transparency of actions by developing country Parties; and transparency of support by developed country Parties.

Move the paragraphs on accounting to the mitigation section.

Merge this section with section K below.

Move paragraph 69 (d) and (e) (option 1) to the mitigation section and retain (a) and (c) in transparency section.

Include content of paragraph 69 k (of option 1) in a decision.

Restructure paragraph 69 into separate paragraphs on transparency of mitigation and transparency of support.

K. Time frames and process related to commitments / contributions / Other matters related to implementation and ambition

Commitments / contributions / actions / scope of implementation and ambition

70. The starting date for the implementation of this agreement to be 1 January 2020 / 31 December 2020 / 1 January 2021; and the end date of this agreement to be 2030 / 2040 / 2050 / 2100 / durable forever.

71. Pursuant to Article 2 of the Convention, Parties to periodically communicate or update their proposed commitments / contributions:

Option 1: Every five years for all Parties;

Option 2: Commitments shall be inscribed every five years, beginning in 2015. All Parties shall communicate proposed commitments in the 12 to 18 months prior to their inscription. The commitments will cover a five-year period, ending 10 years after the inscription year. Parties may also propose an indicative commitment covering a further five–year period, which can be confirmed or enhanced five years later, when formally inscribed (2020);

Option 3: Every five years, indicating the commitment / contribution / action for the subsequent five-year period as well as an indicative commitment / contribution / action for the following five-year period;

Option 4: Every five years for developed country Parties only;

Option 5: Every five years for developed country Parties and every 10 years for developing country Parties;

Option 6: Every five years for the upcoming period and an indication for the following period only for mitigation: annual or biennial time frame for means of implementation in line with national budgets; different time frame for adaptation;

Option 7: By 2030 / 2025 for all Parties;

Option 8: By 2025 and/or 2030 for all developed country Parties only, and with the diversity of end dates for developing country Parties;

Option 9: Every 10 / x years, with a midterm review;

Option 10: For a period to be determined by the governing body.

72. Parties to communicate their proposed commitments / contributions / actions at least 12 months prior to their formalization / finalization, but not earlier than 18 months prior to that.

73. ***Option 1***: The scope of the commitments / contributions / actions will:

Option (a): Be nationally determined;

Option (b): Be defined by the provisions of this agreement;

Option (c): Include mitigation, adaptation, finance, technology and capacity-building, and transparency of action and support;

Option (d): Include mitigation, recognizing that commitments on adaptation, finance, technology and capacity-building, and transparency of action and support are subject to separate provisions of this agreement;

Option (e): Include mitigation only.

Option 2: Implementation and ambition are related to:

a. Mitigation, adaptation, finance, technology and capacity-building;

b. For developed country Parties: mitigation and finance, technology and capacity-building support to developing country Parties for their mitigation and adaptation actions;

c. For developing country Parties: mitigation and/or adaptation.

74. When communicating their contributions, Parties to provide up-front information, along with their proposed commitments / contributions / actions that:

Option 1: Facilitates the clarity, transparency and understanding of those commitments / contributions / actions, on the basis of the relevant arrangements for reporting information resulting from the Bali Action Plan (as detailed in decision x/CP.x);

Option 2: Facilitates the clarity, transparency and understanding of those commitments / contributions / actions (as detailed in decision x/CP.x).

75. Upon communication, commitments / contributions / actions to be made publicly available by the secretariat.

Ex ante consideration / Further facilitation of transparency and clarity / Consultative process/period

76. ***Option 1***: No ex ante consideration process / no arrangements for further facilitating transparency and clarity;

Option 2: After their communication, commitments / contributions / actions will be subject to an ex ante consideration process / further facilitation of transparency and clarity / a consultative period/process in order to:

Option (a):

a. Facilitate understanding of the level of ambition and fairness / level of ambition of the commitments / contributions and the long-term temperature goal in the context of a Party's long-term low-emission development pathway;

b. Assess the adequacy and fairness of the aggregated contributions / the adequacy of the aggregated contributions / the aggregated contributions compared with science, as part of the principle-based reference framework;

c. Assess the extent and availability of support from Annex II Parties to non-Annex I Parties, and, in that context, the potential additional ambition of non-Annex I Parties;

d. Assist countries that have not communicated their commitments / contributions;

e. Facilitate understanding of the comparability of effort of the commitments / contributions / actions; and of the global aggregate commitment;

f. Address / understand / determine / discuss deficits in the light of the ambition required / facilitate the analysis of national mitigation potential and address deficits in the light of the ambition required.

Option (b):

a. Enhance the clarity, transparency and understanding of the aggregate effect of the communicated intended nationally determined contributions;

b. Facilitate the efforts by Parties that have not communicated their intended nationally determined contributions up to that point.

Option (c):

a. Facilitate the clarity of the comparability of the commitments of by developed country Parties, in accordance with their historical responsibilities, requirements of science and leadership in addressing climate change and the requirements of science;

b. Facilitate understanding of the diversity, barriers and needs of the enhanced actions undertaken by developing country Parties, bearing in mind their first and overriding priority of economic and social development and poverty eradication.

76.1 Parties' commitments / contributions / actions to be considered based on:

Option (a): A consultative process to ensure clarity, transparency and understanding of the commitments / contributions;

Option (b): A principle-based reference framework to be established to ensure clarity, transparency and understanding of the commitments / contributions / actions;

Option (c): Existing arrangements and processes under the Convention.

76.2 The ex ante consideration process / further facilitation of transparency and clarity / consultative period/process is to:

Option (a):

a. Be science-based and informed by the assessments of the IPCC, moving to assessment reports every five years (e.g. 2019, 2024, 2029);

b. Be inclusive, consultative, facilitative, supportive, non-prescriptive, non-intrusive, and non-punitive.

Option (b):

a. Be science-based and informed by the assessments of the IPCC, moving to assessment reports every five years (e.g. 2019, 2024, 2029);

b. Be inclusive, consultative, facilitative, supportive, non-prescriptive, non-intrusive, and non-punitive;

c. Be conducted in accordance with Article 4, paragraph 2(d), of the Convention;

d. Reflecting the differences in Annex A and Annex B;

e. Be based on the existing experience from the clarification of the commitments of developed country Parties and the understanding of the NAMAs of developing country Parties.

76.3 The ex ante consideration process / further facilitation of transparency and clarity / consultative period/process to take place:

Option (a): In the year in which the commitments / contributions / actions are communicated;

Option (b): In the year after the commitments / contributions / actions have been communicated;

Option (c): In the year prior to the inscription of the contribution in the agreement for mitigation and means of implementation / in the 12 months prior to the session at which the commitment would be inscribed;

Option (d): Each Party to go through a consultative period for four to six months after the submission of its intended nationally determined contribution.

76.4 On the basis of the ex ante consideration process / further facilitation of transparency and clarity / consultative period/process:

Option (a): Each Party to consider the recommendations resulting from the process;

Option (b): Each Party to revise its commitment / contribution on a voluntary basis;

Option (c): Each Party to adjust / revise on a voluntary basis its commitment / contribution upwards, through an adjustment procedure in accordance with decisions of the governing body;

Option (d): Parties will undertake top-down adjustments based on a global carbon budget.

76.5 The governing body shall develop and adopt modalities and procedures for the ex ante consideration process / further facilitation of transparency and clarity / consultative period/process by its [X] session:

a. A web platform where Parties and other actors are able to pose questions and Parties are encouraged to answer the questions that they receive;

b. Consultations among Parties, including through workshops and round tables;

c. A joint Subsidiary Body for Implementation (SBI) / SBSTA programme to prepare recommendations for the COP;

d. A technical body / panel / task force to be established that undertakes analytical work, examines the adequacy and fairness of commitments / contributions and prepares recommendations; and/or on mitigation and means of implementation;

e. Inputs to the process, including modalities for the analysis, synthesis and/or compilation of the commitments / contributions.

76.6 The governing body shall review, on a periodic basis, the modalities and procedures, with a view to ensuring adaptability, efficiency and effectiveness, taking into account the different characteristics of mitigation and means of implementation and the need to address them in a distinct manner over time.

Formalization / finalization / reflection of enhanced action

77. The commitments / contributions / actions communicated by Parties to be:

Option 1: Inscribed in a single annex to this agreement;

Option 2: Inscribed in annexes to this agreement:

Option (a): Annex A for quantified emission reduction commitments (QERCs) and Annex B for emission limitation commitments and strategies;

Option (b): Annex A: a table of heading numbers of quantified emission reduction commitments of developed country Parties; and Annex B: a compilation of communications of enhanced mitigation actions by developing country Parties.

Option 3: Inscribed in attachments to this agreement:

- Attachment A for developed country Parties' emission reduction commitments;
- Attachment B for developed country Parties' finance, technology and capacity-building commitments;
- Attachment C for developing country Parties' enhanced actions.

Option 4: Adopted by a decision of the governing body;

Option 5: Contained in national schedules, to be communicated to the secretariat. The secretariat shall make all national schedules publicly available;

Option 6: Inscribed in a country contribution document, with a provision in the agreement creating an obligation for each Party to communicate and implement their contribution;

Option 7: Recorded in an online registry of national mitigation targets, which is to form an integral part of this agreement.

78. Parties may, at any time, make upward adjustments to their commitments / contributions / actions by means of a simplified procedure:

Option 1: By way of communication to the secretariat or the depositary;

Option 2: By way of an amendment to the respective annex and in the context of the procedures referred to in section M below;

Option 3: The governing body shall adopt modalities of the simplified procedure / Any modalities to be adopted by the governing body.

79. ***Option 1***: A Party to be allowed to exceptionally adjust its commitment / contribution, subject to certain conditions, including: if subsequent rules differ substantially from the Party's assumptions, or force majeure, provided that there is no backsliding;

Option 2: A developing country Party may adjust its contribution when severely affected by an extreme natural event;

Option 3: No other adjustments allowed.

Strategic review of implementation / Aggregate ambition assessment / Enhanced ambition mechanism

80. The governing body shall regularly conduct a strategic review of implementation / aggregate ambition assessment.

81. The purpose of the review / assessment /mechanism is to:

Option 1: Review the effect / ambition and the implementation of the individual commitments / contributions / actions of Parties as well as the aggregate effect / ambition of all Parties' commitments, in order to assess progress towards operationalizing the ultimate objective of the Convention, as set out in its Article 2 of the Convention, pursuant to paragraph 3 above;

Option 2:

a. Track the performance of the implementation of the post-2020 enhanced action;
b. Review the adequacy of the long-term aspect in the light of the objective of the Convention;
c. Review the overall progress towards achieving the objective of the Convention;
d. Consider the historical responsibilities of Parties in relation to the global temperature increase;
e. Increase the level of ambition.

82. The review / assessment / mechanism shall take place:

Option 1: Starting in [X] / after the agreement has come into effect, every one / two / four / five years;

Option 2: Immediately following the publication of each IPCC assessment reports.

83. The review / assessment / mechanism shall be:

Option 1: Applicable to developed country Parties;

Option 2: Applicable to all Parties;

Option 3: Applicable to all Parties, as follows:

a. Implementation and ambition of emission reduction commitments of developed country Parties;

b. Adequacy and progress of finance, technology and capacity-building support from developed country Parties to developing country Parties;

c. Implementation and further enhanced mitigation and/or adaptation action by developing country Parties.

84. The review / assessment / mechanism should include:

a. International revisit of the emission reduction commitments of developed country Parties;

b. Multilateral consideration of developed country Parties' commitments on finance, technology and capacity-building support;

c. Domestic reflection and international understanding of enhanced action on mitigation and/or adaptation undertaken by developing country Parties, in a manner that is non-punitive, non-intrusive and respecting national sovereignties;

d. A forum on lessons learned on innovation of sustainable development pathways among all Parties.

85. The review / assessment / mechanism to be consistent with science, on the basis of equity and sustainable development, and informed by:

Option 1:

a. Each country's progress towards the achievement of its commitments / contributions, aggregated global emission trends and the aggregate progress towards attaining the global goals established under this agreement;

b. Assessments undertaken pursuant to other provisions of this agreement of the adequacy and progress related to adaptation and finance, technology and capacity-building support;

c. A process to facilitate the clarity, transparency and understanding of Parties' commitments / contributions, whereby the ambition and fairness of Parties' mitigation commitments can be considered in the light of the long-term temperature limit;

d. The assessment reports of the IPCC;

e. Information reported by Parties on the implementation of their commitments / contributions, as set out in section J below *(Transparency of action and support)*;

f. Information communicated by Parties on their future commitments / contributions, as set out in this section;

g. A process of technical examination of mitigation potential, opportunities, co-benefits of mitigation action and policy options for enhancing mitigation ambition.

Option 2:

a. Each country's progress towards the achievement of its commitments / contributions, including information from the national communications, biennial reports, inventories and national inventory reports of developed country Parties, as well as from the review reports and the IAR process; and information from the national communications and BURs, as well as from the ICA process;

b. Assessments undertaken pursuant to other provisions of this agreement of the adequacy and progress related to adaptation and finance, technology and capacity-building support by from developed country Parties;

c. Arrangements to facilitate the clarity, transparency and understanding of the commitments / contributions;

d. The assessment reports of the IPCC;

e. Assessment against an equity reference framework by a technical panel of experts;

f. The report on the 2013–2015 review and subsequent reviews;

g. Reports of all of the existing subsidiary bodies under the Convention and new institutional arrangements established by this agreement;

h. A process of technical examination of mitigation potential, opportunities and policy options to enhance the level of ambition.

86. On the basis of the review / assessment / mechanism:

Option 1: The governing body shall recommend adjustments to Parties' commitments in response to the findings of the review / action, in order to harness unrealized opportunities to mitigate and adapt to climate change and to mobilize the necessary financial support.

Option 2: Parties to take into account the recommendations arising from the review / assessment / mechanism in preparing their successive commitments / contributions / actions / Parties to increase their level of ambition after the review, including:

Option (a):

a. Adjusting existing commitments / contributions / actions upward or communicating more ambitious mitigation commitments / contributions related to climate change;

b. Addressing barriers to and constraints on implementation related to the provision of finance, technology and capacity-building support.

Option (b):

a. Developed country Parties adjusting their existing commitments / contributions upward or communicating more ambitious mitigation commitments / contributions;

b. Developed country Parties adjusting their existing commitments / contributions upward or communicating more ambitious finance, technology and capacity-building commitments / contributions / policies / measures;

c. Addressing barriers and constraints of developing country Parties to implementation related to the provision of finance, technology and capacity-building support, and considering further action on implementation by developing country Parties.

87. ***Option 1***: The governing body shall develop and adopt modalities for the review / assessment / mechanism by 2018, drawing on lessons learned from previous review processes under the Convention and its Kyoto Protocol in order to ensure the effectiveness of the review / assessment / mechanism;

Option 2: The modalities and organization of the work on the strategic review to be developed and adopted based on and drawing upon lessons learned from previous review processes under the Convention and its Kyoto Protocol, including inter alia:

a. The review referred to in Article 4, paragraph 2(d), of the Convention;

b. The ambition mechanism under the Kyoto Protocol;

c. IAR and ICA;

d. The clarification of the quantified emission limitation and reduction commitments of Annex I Parties and the process of understanding the diversity of NAMAs by non-Annex I Parties;

e. The 2013–2015 review;

f. The multilateral consultative process for the resolution of questions regarding the implementation of the Convention, as set out in its Article 13:

Option (a): Utilizing the existing IAR and ICA processes after further amending their mandates and guidance;

Option (b): Utilizing the existing 2013–2015 review after further improving the modalities and organization of the work.

Structural suggestions on section K:

Tailor the content of this section to specific areas

Move the content to mitigation section

Divide this section into two parts: section K for transparency for mitigation and section K bis *on transparency for contributions on support*

Merge the ex ante consideration / consultative period and the strategic review / "aggregate consideration process"

Include details contained in paragraphs 76.1, 76.2, 76.3, 76.4 and 76.5 in decisions

Restructure text in paragraphs 70–73 as follows: objectives / purpose, timing, guidance on modalities

Move para 74 to transparency

Include specific modalities and procedures in decisions

Divide the review into review of individual commitments and aggregate commitments drawing on elements from paragraphs 76 and 81–87.

L. Facilitating implementation and compliance

88. In order to assist Parties in implementing their commitments / contributions and/or to address compliance issues in a manner that is expert-based, non-confrontational and non-judicial:

Option 1: The governing body shall adopt procedures and/or mechanisms;

Option 2: A compliance mechanism or committee / implementation committee / a standing body responsible for promoting implementation and compliance and assessing Parties' performance is established;

Option 3: Implementation shall be strengthened through enhanced transparency, including through the consideration of the multilateral consultative process under Article 13 of the Convention;

Option 4: No specific provisions required.

For option 1 and option 2, arrangements shall cover:

a. Regarding commitments / contributions (substantive scope):

Option (a): All commitments / contributions in the agreement, including reporting;

Option (b): Specified commitments / contributions, excluding adaptation, including reporting;

Option (c): Implementation of Parties' schedules and the submission of biennial communications;

Option (d): Mitigation, MRV and accounting commitments only.

b. Regarding Parties:

Option (a): All Parties;

Option (b): Developed country Parties regarding their commitments / contributions on mitigation, finance, transfer of technology and capacity-building.

c. Structure of the mechanism / committee:

Option (a): Separate branches – an enforcement branch for Parties that have a QERC in Annex A / to review compliance with commitments made by developed country Parties and those developing country Parties that have made economy-wide quantified emission reduction commitments, with respect to their commitments on mitigation, as well as commitments on adaptation, finance, technology transfer and capacity-building, and a facilitative branch for commitments and strategies in Annex B / to review the implementation of contributions made by developing countries and to assist them in their efforts to meet these contributions; the Compliance Committee may establish technical panels to assist them in their task;

Option (b): A standing, non-political, expert body of members who serve in their individual capacity, responsible for facilitating and promoting compliance with the obligations under the agreement;

Option (c): One body for facilitation;

Option (d): Platforms to deal with early warning, facilitation and enforcement.

d. Modalities such as:

- Membership;
- Triggers to commence a procedure:
  - Early warning for potential non-compliance;
  - Technical expert teams triggering questions of implementation.
- Procedures;
- Use of economic instruments:
  - Use of economic instruments such as market mechanisms as a way to promote compliance.
- Measures and/or consequences:
  - ***Option (a)***: Facilitative measures only;
  - ***Option (b)***: Facilitative measures and sanctions for recurring non-compliance;
  - ***Option (c)***: Facilitative measures for non-Annex I Parties and sanctions for Annex I Parties;
  - ***Option (d)***: Expert groups that support developing country Parties in the preparation and implementation of contributions.
- The Compliance Committee shall report annually to the Conference of the Parties to this agreement.

M. Procedural and institutional provisions

Institutional arrangements

89. *Provisions relating to the governing body of the agreement (based on Article 13(1) of the Kyoto Protocol)*: The Conference of the Parties, the supreme body of the Convention, shall serve as the meeting of the Parties to this agreement.

90. *Provisions relating to the secretariat (based on Article 14 of the Kyoto Protocol)*: The secretariat established by Article 8 of the Convention shall serve as the secretariat of this agreement. Article 8, paragraph 2, of the Convention on the functions of the secretariat, and Article 8, paragraph 3, of the Convention on arrangements made for the functioning of the secretariat, shall apply mutatis mutandis to this agreement. The secretariat shall, in addition, exercise the functions assigned to it under this agreement and the governing body.

91. *Provisions on the SBSTA and the SBI (based on Article 15 of the Kyoto Protocol)*: The SBSTA and the SBI established by Articles 9 and 10 of the Convention shall serve as, respectively, the SBSTA and the SBI of this agreement. The provisions relating to the functioning of these two bodies under the Convention shall apply mutatis mutandis to this agreement. Sessions of the meetings of the SBSTA and the SBI of this agreement shall be held in conjunction with the meetings of, respectively, the SBSTA and the SBI of the Convention. Parties to the Convention that are not Parties to this agreement may participate as observers in the proceedings of any session of the subsidiary bodies. When the subsidiary bodies serve as the subsidiary bodies of this agreement, decisions under this agreement shall be taken only by those that are Parties to this agreement. When the subsidiary bodies established by Articles 9 and 10 of the Convention exercise their functions with regard to matters concerning this agreement, any member of the Bureaux of those subsidiary bodies representing a Party to the Convention but, at that time, not a Party to this agreement, shall be replaced by an additional member to be elected by and from among the Parties to this agreement.

92. The governing body shall establish, building on the work conducted under the SBSTA regarding the framework for various approaches, means for cooperative arrangements to be defined and accounted for under the agreement, that strengthen and create synergies between mechanisms under the Convention and its related legal instruments and mechanisms established or to be established, jointly or individually, by Parties, and avoid the double counting of efforts, including:

- The Financial Mechanism;
- The Technology Mechanism;
- The flexibility mechanisms established by Articles 6 and 12 of the Kyoto Protocol;
- The new market-based mechanism defined in decision 2/CP.17, paragraph 83;
- Alternative policy approaches, such as joint mitigation and adaptation;
- A REDD-plus mechanism / The Warsaw Framework for REDD-plus;
- A mechanism for climate resilience and sustainable development;
- A joint mitigation and adaptation mechanism for the integral and sustainable management of forests;
- Subnational, national and regional emissions trading schemes.

93. *Immunities*:

Option 1: Each Party to this agreement shall accord to the persons exercising their functions on any board, panel, group or other institution established by this agreement, during their journey to and from the place of meeting, immunity from legal process. The governing body shall determine the modalities for the operation of immunities;

Option 2: No provision on immunities.

Procedural provisions / Final clauses

94. *Signature, ratification, acceptance, approval and accession (based on Article 24(1) of the Kyoto Protocol)*:

94.1 This agreement shall be open for signature and subject to ratification, acceptance or approval by States and regional economic integration organizations (REIOs) which are Parties to the Convention at a specified place and time. Thereafter, the agreement would be open for accession by such States and REIOs;

94.2 *Provisions on REIOs (based on Article 22(2) and (3) of the Convention)*: Any REIO which becomes a Party to the agreement without any of its member States being a Party shall be bound by all the obligations under

the agreement. In the case of REIOs with one or more member States that are Parties to the agreement, the organization and its member States shall decide on their respective responsibilities for the performance of their obligations under the agreement. In such cases, the organization and the member States shall not be entitled to exercise rights under the agreement concurrently. In their instruments of ratification, acceptance, approval or accession, REIOs shall declare the extent of their competence with respect to the matters governed by the agreement. These organizations shall also inform the Depositary, who shall in turn inform the Parties, of any substantial modification in the extent of their competence;

94.3 Additional requirements on deposit of instruments of ratification, acceptance, approval or accession:

Option 1: Requirements relating to the submission of national schedules at the same time as deposit of instruments of ratification, acceptance, approval or accession;

Option 2: No additional requirements.

95. *Entry into force*:

95.1 ***Option 1***: All entry into force provisions set out in paragraph 95.2 to preclude entry into force before 2020;

Option 2: Entry into force provisions to allow for possibility of entry into force by 2020.

95.2 ***Option 1***: This agreement shall enter into force on the thirtieth / ninetieth day after the date on which not less than 10/50/[X] (a number that is not over- or under-inclusive) Parties to the Convention have deposited their instruments of ratification, acceptance, approval or accession;

Option 2: The agreement will come into effect on and be implemented from 2020, subject to the deposit of [X] number of instruments of ratification, acceptance, approval, or accession;

Option 3: A double threshold that includes both a number of Parties ratifying and a percentage of global emission reductions covered by the ratifying Parties / a minimum of global emissions from Parties;

Option 4: The agreement will enter into force on [X] date ("from 2020"), provided that [X] number of Parties have deposited their instruments and that the total of emissions of such Parties constitutes [X] per cent of the global total of emissions in year [X]. If such thresholds have not been met by [X] date, the agreement will enter into force [X] days after the thresholds have been met;

Option 5: Entry into force upon either a sufficiently high number ([X]) of Parties or a percentage ([X]) of global GHG emissions covered, whichever occurs first, but not earlier than on 1 January 2020.

95.3 For each State or REIO that ratifies, accepts or approves the agreement or accedes thereto after the entry into force according to paragraph 95.1, the agreement shall enter into force on the ninetieth / [X] day after the date of deposit by such State or REIO of its instrument of ratification, acceptance, approval or accession (*based on Article 23(2) of the Convention*);

95.4 Provisions on REIOs (*based on Article 23 (3) of the Convention*): For the purposes of paragraph 95, any instrument deposited by a REIO shall not be counted as additional to those deposited by States members of the organization;

95.5 Provisional application:

Option 1: A Party to the Convention that intends to ratify, approve, accept or accede to this agreement, may at any time notify the Depositary that it will apply this agreement provisionally for a period not extending beyond the time of entry into force of the agreement;

Option 2: No specific provision on provisional application.

96. *Amendments to the agreement (based on Article 15 of the Convention)*:

96.1 Any Party may propose amendments to the agreement;

96.2 Amendments to the agreement shall be adopted at an ordinary session of the governing body. The text of any proposed amendment to the agreement shall be communicated to the Parties by the secretariat at least six months before the meeting at which it is proposed for adoption. The secretariat shall also communicate proposed amendments to the signatories to the agreement and, for information, to the Depositary;

96.3 The Parties shall make every effort to reach agreement on any proposed amendment to the agreement by consensus. If all efforts at consensus have been exhausted, and no agreement reached, the amendment shall as a last resort be adopted by a three-fourths majority vote of the Parties present and voting at the meeting.

The adopted amendment shall be communicated by the secretariat to the Depositary, who shall circulate it to all Parties for their acceptance;

96.4 Instruments of acceptance in respect of an amendment shall be deposited with the Depositary. An amendment adopted in accordance with paragraph 3 above shall enter into force for those Parties having accepted it on the ninetieth day after the date of receipt by the Depositary of an instrument of acceptance by at least three fourths of the Parties to the agreement;

96.5 The amendment shall enter into force for any other Party on the ninetieth day after the date on which that Party deposits with the Depositary its instrument of acceptance of the said amendment;

96.6 For the purposes of this Article, "Parties present and voting" means Parties present and casting an affirmative or negative vote.

97. *Amendments to any annexes to the agreement*:

Option 1: Amendments to the Annexes to this agreement, which are an integral part of the agreement, shall be adopted by the governing body and shall apply forthwith, without the requirement of a ratification process;

Option 2:

97.1 Annexes to the agreement shall form an integral part thereof and, unless otherwise expressly provided for, a reference to the agreement constitutes at the same time a reference to any annexes thereto. Without prejudice to the provisions of Article X, paragraphs x and x, such annexes shall be restricted to lists, forms and any other material of a descriptive nature that is of a scientific, technical, procedural or administrative character;

97.2 Annexes to the agreement shall be proposed and adopted in accordance with the procedure set forth in Article X, paragraphs x and x;

97.3 An annex that has been adopted in accordance with paragraph 97.2 above shall enter into force for all Parties to the agreement six months after the date of the communication by the Depositary to such Parties of the adoption of the annex, except for those Parties that have notified the Depositary, in writing, within that period of their non-acceptance of the annex. The annex shall enter into force for Parties which withdraw their notification of non-acceptance on the ninetieth day after the date on which withdrawal of such notification has been received by the Depositary;

97.4 The proposal, adoption and entry into force of amendments to annexes to the agreement shall be subject to the same procedure as that for the proposal, adoption and entry into force of annexes to the agreement in accordance with paragraphs 97.2 and 97.3 above;

97.5 If the adoption of an annex or an amendment to an annex involves an amendment to the agreement, that annex or amendment to an annex shall not enter into force until such time as the amendment to the agreement enters into force.

Option 3: Opt-in (ratification procedure).

Option 4: Simplified procedure for the mitigation commitments.

98. *Settlement of disputes (based on Article 19 of the Kyoto Protocol)*: The provisions of Article 14 of the Convention on settlement of disputes shall apply mutatis mutandis to this agreement.

99. *Voting / Right to vote (based on Article 18 of the Convention)*:

99.1 Each Party shall have one vote, except as follows: REIOs, in matters within their competence, shall exercise their right to vote with a number of votes equal to the number of their member States that are Parties to this agreement. Such an organization shall not exercise its right to vote if any of its member States exercises its right, and vice versa;

99.2 *Placeholder* for provisions with respect to Parties who put forward a joint contribution.

100. *Depositary (based on Article 19 of the Convention)*: The Secretary-General of the United Nations shall be the Depositary of this agreement:

Option 1: In addition to the normal functions of the Depositary, the Depositary should also hold and manage a repository of country contribution documents;
Option 2: No additional functions for the Depositary.

101. *Reservations (based on Article 24 of the Convention)*:

Option 1: No reservations may be made to this agreement;

Option 2: Provide for reservations.

102. *Withdrawal (based on Article 25 of the Convention)*: At any time after [X] years from the date on which this agreement has entered into force for a Party, that Party may withdraw from this agreement by giving written notification to the Depositary. Any such withdrawal shall take effect upon expiry of one year from the date of receipt by the Depositary of the notification of withdrawal, or on such later date as may be specified in the notification of withdrawal. Any Party that withdraws from the Convention shall be considered as also having withdrawn from this agreement.

103. *Authentic text (based on Article 26 of the Convention)*: The original of this agreement, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

Structural suggestions

All institutional issues should be addressed in one place.

Include specific institutional arrangements under the respective elements of the agreement. Consider the relationship between the various mechanisms once there is clarity on the content of new mechanisms.

Annex / Annex A / Annex B / Attachments (for paragraph 77, options 1, 2 and 3)

[…]

10th plenary meeting
14 December 2014

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Agenda item 3
Implementation of all the elements of decision 1/CP.17

Draft Paris Agreement

Draft conclusions proposed by the Co-Chairs

The Ad Hoc Working Group on the Durban Platform for Enhanced Action agreed to transmit the text titled "Draft agreement and draft decision on workstreams 1 and 2 of the Ad Hoc Working Group on the Durban Platform for Enhanced Action" contained in annex I to the Conference of the Parties at its twenty-first session for further consideration. It also agreed to transmit the text contained in annex II to the Conference of the Parties at its twenty-first session.

GE.15-21478(E)

Please recycle

Annex I

Draft agreement and draft decision on workstreams 1 and 2 of the Ad Hoc Working Group on the Durban Platform for Enhanced Action

Work of the ADP Contact Group incorporating bridging proposals by the Co-facilitators[1]

A. DRAFT AGREEMENT

[The Parties to this Agreement,

Pp1 *Being* Parties to the United Nations Framework Convention on Climate Change (hereinafter referred to as "the Convention"),

Pp2 *In pursuit* of the objective of the Convention, and being guided by its principles, including the principle of equity and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances,

Pp3 *Pursuant to the* Durban Platform for Enhanced Action established by decision 1/CP.17 of the Conference of the Parties to the Convention at its seventeenth session,

Pp4 *Recognizing* the intrinsic relationship between climate change, poverty eradication and equitable access to sustainable development, and reaffirming that responses to climate change should aim to meet the specific needs and concerns arising from the adverse impacts of response measures,

Pp5 *Taking account* of the specific needs of developing country Parties, and especially those that are particularly vulnerable to climate-related events,

Pp6 *Taking account also* of the specific needs and special situations of the least developed country (LDC) Parties as set out in Article 4, paragraph 9, of the Convention, and the specific circumstances of small island developing States (SIDS),

Pp7 *Emphasizing* the need to respond to the urgent threat of climate change on the basis of the best available scientific knowledge, in particular, the assessment reports of the Intergovernmental Panel on Climate Change,

Pp8 *[Noting* that the largest share of historical global emissions of greenhouse gases has originated in developed countries, that per capita emissions in developing countries are still relatively low and that the share of global emissions originating in developing countries will grow to meet their social and development needs,]

Pp9 *[Recognizing* that Parties should take action to address climate change in accordance with evolving economic and emission trends, which will continue to evolve post-2020,]

Pp10 Emphasizing the importance of promoting, protecting and respecting all human rights, the right to development, the right to health, and the rights of indigenous peoples, migrants, children, persons with disabilities and people in vulnerable climate situations [, and under occupation,] as well as promoting gender equality and the empowerment of women, while taking into account the needs of local communities, intergenerational equity concerns, and the integrity of ecosystems and of Mother Earth, when taking action to address climate change,

Pp11 *Taking into account* the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities,

[1] Proposals which oppose the inclusion of certain provisions in the Agreement or the Decision do not figure in this text. This is on the understanding that the inclusion of a provision is without prejudice to the views of Parties that may not support the elaboration of any such provision at all. Language that is not bracketed is not necessarily agreed.

Pp12 *Recognizing* the fundamental priority of safeguarding food security and ending hunger, and the particular vulnerabilities of food production systems to the adverse impacts of climate change,

Pp13 *Also recognizing* the importance of the conservation and enhancement, as appropriate, of sinks and reservoirs of greenhouse gases referred to in Article 4, paragraph 1(d), of the Convention, including through internationally agreed approaches [such as REDD-plus and the joint mitigation and adaptation approach for the integral and sustainable management of forests], and of their non-carbon co-benefits,

Pp14 *Affirming* the importance of education, training, public awareness, public participation and public access to information and cooperation at all levels on the matters addressed in this Agreement, and recognizing the importance of engagements of all levels of government and various actors, in accordance with respective national legislations of Parties, in addressing climate change,

Have agreed as follows:

Article 1 *(DEFINITIONS)*

For the purposes of this Agreement, all definitions contained in Article 1 of the Convention apply.

Article 2 *(PURPOSE)*

1. The purpose of this Agreement is [to enhance the implementation of the Convention] [and] [to achieve the objective of the Convention as stated in its Article 2]. In order to strengthen the global response to the threat of climate change, Parties agree to take urgent action and enhance cooperation and support so as:
   (a) To hold the increase in the global average temperature [below 1.5 °C] [or] [well below 2 °C] above pre-industrial levels by ensuring deep reductions in global greenhouse gas [net] emissions;
   (b) To Increase their ability to adapt to the adverse impacts of climate change [and to effectively respond to the impacts of the implementation of response measures and to loss and damage];
   (c) To pursue a transformation towards sustainable development that fosters climate resilient and low greenhouse gas emission societies and economies, and that does not threaten food production and distribution.
2. [This Agreement shall be implemented on the basis of equity and science, and in accordance with the principle of equity and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances, and on the basis of respect for human rights and the promotion of gender equality [and the right of peoples under occupation].]

Article 2bis *(GENERAL)*

1. [All Parties [shall] regularly prepare, communicate [and implement] [intended] nationally determined [contributions][components] [on [mitigation] and adaptation] [undertakings in adaptation planning] [and means of implementation][2] [towards achieving the [purpose of this Agreement as set out in Article 2 of the Convention] [objective of the Convention as set out in its Article 2],] [in accordance with Article 4 of the Convention] [in accordance with the provisions of this Agreement, including the specific provisions related to mitigation and adaptation and means of implementation.]]
2. [Each Party's [intended] nationally determined contribution will represent a progression in the light of Parties' differentiated responsibilities and commitments under the Convention.]
3. [The extent to which developing country Parties will effectively implement this Agreement will depend on the effective implementation by developed country Parties of their commitments on the provision of finance, technology development and transfer and capacity-building.]

[2] Without prejudice to the terminology to be used to describe Parties' commitments, undertakings and efforts under the Paris Agreement

4. [Successive [intended] nationally determined contributions will be [informed by the result of the global stocktake as defined in Article 10 of the Convention] and communicated before the expiry of the previous [intended] nationally determined contribution by the Party concerned.]

Article 3 *(MITIGATION)*

{Collective long-term goal}

1. [Parties [collectively][cooperatively] aim to reach the global temperature goal referred to in Article 2 through:

   (a) [A peaking of global greenhouse gas emissions as soon as possible[, recognizing that peaking requires deeper cuts of emissions of developed countries and will be longer for developing countries]]

   (b) [Rapid reductions thereafter [in accordance with best available science] to at least a X [-Y] per cent reduction in global [greenhouse gas emissions][CO_2[e]] compared to 20XX levels by 2050]];

   (c) [Achieving zero global GHG emissions by 2060-2080]

   (d) [A long-term low emissions transformation] [toward [climate neutrality][decarbonization] [over the course of this century] [as soon as possible after mid-century];

   (e) [Equitable distribution of a global carbon budget based on historical responsibilities and [climate] justice]

   [on the basis of equity and common but differentiated responsibilities and respective capabilities] [in the context of sustainable development and eradication of poverty][while ensuring that food security, production and distribution is not threatened][informed by the best available science].

1bis. [To achieve this, policies and measures should take into account different socio-economic contexts, be comprehensive, cover all relevant sources, sinks and reservoirs of greenhouse gases and adaptation, and comprise all economic sectors [for developed countries]]

{Individual efforts}

2. Each Party shall regularly prepare, communicate [and maintain] [successive] ###[3] and [shall][should][other] [take appropriate domestic measures] [have in place][identify and] [pursue] [implement] [[domestic laws], [nationally determined] policies or other measures] [designed to] [implement][achieve][carry out][that support the implementation of] its ###].

[Possible placeholder for Article 3.8 and 3.9]

[Possible placeholder for context CBDR&RC[, in the light of different national circumstances]]

[Possible placeholder referring to article 4 of the Convention]

[Possible placeholder for support]

{Differentiated efforts}

Option 1:

3. In accordance with Article 4, paragraph 2, of the Convention, developed country Parties and other Parties included in Annex I shall undertake quantified economy-wide absolute emission reduction and limitation commitments/targets, which are comparable, measurable, reportable and verifiable, cover all greenhouse gases and are implemented domestically without any conditions.

3bis. In accordance with Article 4, paragraphs 1, 3, 4, 5 and 7, of the Convention, developing country Parties should undertake diversified enhanced mitigation actions/efforts in a measurable, reportable, and verifiable manner, in

[3] Without prejudice to how the final agreement '###' will refer to the mitigation commitments/contributions/other of Parties and pending resolution to Article 2bis. Options include:
Option 1: Nationally Determined Mitigation [Contribution][Commitment] (NDMC)
Option 2: Nationally Determined Mitigation Component of the Contribution referred to in Article 2bis (NDMCC)
Option 3: Mitigation Component of the [Intended] Nationally Determined Contribution (MCNDC)
Option 4: INDC which can be in the form of co-benefits resulting from the Party's adaptation contributions and economic diversification plans.

the context of sustainable development and supported and enabled by the provision of adequate finance, technology and capacity-building by developed country Parties.

Option 2:

3. **Option (a):** Each Party that has previously [communicated] [implemented] absolute economy-wide emissions reduction or limitation targets should continue to do so and all Parties should aim to do so over time.

   Option (b): Developed country Parties [and other Parties [in a position][that determine] to do so] should take the lead in mitigation efforts, including by [communicating] [and implementing] absolute economy-wide emissions reduction [or limitation] targets and all other Parties should aim to do so over time.

3bis. [Developed country Parties should continue to take the lead].[4]

{*Flexibility*}

4. LDCs [and SIDS][and African states] may communicate their ### at their discretion, including information on strategies, plans and actions for low GHG development, reflecting their special circumstances.

{Support}[5] *(moved up)*

5. **Option 1**: Developed country Parties and other developed Parties included in Annex II to the Convention [and other Parties with the capacity to do so] shall provide new and additional financial resources, technology transfer and capacity-building to meet the agreed full costs incurred by developing country Parties in complying with their obligations under this Article.

   Option 2: Developing country Parties[6] are eligible for support in the implementation of this Article.

   Option 3: The extent to which developing country Parties will effectively implement their commitments will depend on the effective implementation by developed country Parties of their commitments related to financial resources, transfer of technology and capacity-building.

{Progression/ambition}

6. Each Party's successive ### [shall][should][will] represent a progression beyond the Party's previous efforts and reflect its highest possible ambition [based on common but differentiated responsibilities and respective capabilities [[and] in light of different national circumstances [and best available science]] [based on provision of finance, technology and capacity-building to developing countries].[7]

{Information}

7. [In communicating their ###, all Parties shall provide the information necessary for the clarity, transparency and understanding in accordance with decision 1/CP.21 and any subsequent decisions of the CMA].

{Features[8]*}*

8. [**Option 1:** Each Party's ### [shall][should] be quantified or quantifiable, [be unconditional, [9] at least in part], maintain coverage of emissions and removals covered previously, and strive for coverage of all significant emissions and removals over time. Additional guidance may be elaborated by decision [of the CMA][1/CP.21].]

   [**Option 2:** Each Developed country Party's ### shall be quantified, cover all key categories of emissions by sources and removals by sinks and use common Intergovernmental Panel on Climate Change (IPCC) metrics,

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4 Overlaps with Option (b).

5 Placeholder until support is addressed.

6 Without prejudice to the final outcome of the negotiations, in all cases in the draft Agreement and the draft Decision text where, in the context of support, it says "developing country Parties" read "developing country Parties [, including Parties whose special circumstances are recognized by the COP][and other Parties in need of support, including countries with economies in transition]"

7 Depending on the placeholder on 3.1, 3.2 or 3.3 and pending resolution on 2bis.

8 Note: some of the sub-items listed below feature in the October/November text taken up elsewhere in Article 3 or the Agreement (eg link to global stocktake, environmental integrity).
Note: some Parties suggested that some of these sub-items could be taken up in Article 9.
Note: Flexibility for LDCs, SIDS and African States addressed elsewhere in Article 3.

9 [South Africa wishes its reservation on the original text in brackets to be recorded: "We do not accept any unconditional part of contributions that are nationally determined, particularly if this is a precondition under Art. 17"]

guidance and guidelines for the estimation of greenhouse gas emissions and removals; and others strive to communicate this over time. Additional guidance may be elaborated by the [CMA] [APA] at its [x] session.]

[Option 3: Guidance on the features of ### to be elaborated by decision [of the CMA] [1.CP/21].]

[Option 4: Guidance on the features of ### to be elaborated by decision of the CMA at its x session.]

{Timing}

{First communication}

9. Each Party [shall][should] communicate its first ### no later than [upon ratification or acceptance of][upon joining] this Agreement.

{Subsequent communication*}*

10. **Option 1:** Successive ### shall be communicated by Parties after completion of the current implementation cycle.

Option 2: Each Party shall [communicate its successive][, update or confirm its] ### every five years [on a synchronized basis] [, taking into account the outcomes of the global stocktake referred to in Article 10].

{Ex ante process}

11. [Each Party shall submit an intended ### [x months prior to][well before] the final communication. All Parties shall participate in a [preparatory] process that [facilitates][promotes] clarity, transparency and understanding of the intended ###, including their aggregate effect in the light of the long-term temperature goal referred to in Article 2, including though the production of an aggregate synthesis report. The [preparatory] process shall be conducted in accordance with the modalities and procedures to be adopted by the CMA at its first session.]

{Adjustments}

12. A Party may at any time adjust its existing ### with a view to enhancing its level of ambition [, in accordance with the simplified adjustment procedure referred to in Article 19, paragraph 3]. [Adjustments towards lower ambition levels may only be communicated in case the [developing country] Party's efforts are [severely] affected by an extreme natural event, economic shock or force majeure.][Developing country Parties may adjust their ### at their discretion depending upon the adequacy and availability of finance, technology development and transfer and capacity-building support.]

{Housing}

13. **Option 1:** [The ### communicated by Parties shall be [listed][published] [in an online registry maintained by the secretariat][in Annex [X] to this Agreement][on the UNFCCC website].]

Option 2: [The ### communicated by developed country Parties shall be inscribed in Annex A to this Agreement.

The ### communicated by developing country Parties shall be inscribed in Annex B to this Agreement.]

{Accounting} [10]

14. [**Option 1:** [In the context of of][In tracking progress towards achieving] ###, each Party shall, taking into account decision 1.CP/21 and any future guidance [elaborated for this purpose and agreed][adopted] by the CMA [at its [x][first] session][and may be amended by any subsequent decisions of the CMA], account for anthropogenic emissions and removals included in its ###, [promote][apply the principles of] transparency, accuracy, [completeness], [comparability], and consistency, and [avoid double counting][apply arrangements to avoid double counting] where internationally transferred mitigation outcomes are used [, so as to improve the environmental integrity of the agreement].]

[**Option 2:** In tracking progress towards achievement of their ###, Parties shall apply the principles of transparency, accuracy, completeness, comparability, consistency, avoidance of double counting, and environmental integrity, as further elaborated in [para x] decision 1/CP.21 and any further guidance to be developed under paragraph 14(a) below. Furthermore:

[10] 1.This reflection is without prejudice to placement between mitigation and transparency or anywhere else.
2.This reflection is without prejudice to differentiation and how and if it is treated in any part of the agreement.
3.The formulation of ### would need to reflect the outcome of work being undertaken in relation to Article.

(a) The CMA shall, at its first session, adopt the principles and guidance for tracking progress towards its ###, including with respect to [land use], and internationally transferred mitigation outcomes in accordance with [para x] decision 1/CP.21. Such principles and guidance shall apply to ### to be communicated for subsequent contribution cycles. Parties may elect to apply such guidance to their first ###;

(b) Parties shall ensure methodological consistency between the definition of the ### and its implementation, including with respect to paragraph [X] above;

(c) Parties shall report on progress towards achievement of their ### in accordance with the relevant provisions of Article 9, [para x] decision 1/CP.21.

(d) Parties shall ensure that internationally transferred mitigation outcomes used to meet its ### are real, permanent, additional and verified, and are not double-counted.]

{Methods and guidance}

15. [**Option 1:** In the context of their ###, when recognizing and implementing mitigation actions in respect of anthropogenic emissions and removals [including from [land use] [or REDD-plus]], Parties may draw from [/build on] existing methods and guidance under the Convention and from the IPCC.

Option 2: In elaborating guidance further to paragraph 10 with respect to anthropogenic emissions and removals from [land use], including forests, Parties shall take into account any relevant decisions of the COP/CMP.

Option 3: The rules and guidance related to tracking of progress towards achieving ### accounting shall be adopted by the [CMA][APA] at its [x] session.]

{Response measures}

[Preamble: Parties acknowledge the importance of cooperation, including around economic diversification to reduce the adverse impacts of the implementation of response measures.]

16. *[*[Parties shall give full consideration to what actions are necessary under this Agreement to meet the specific needs and concerns of developing country Parties arising from the impact of the implementation of response measures, including in terms of economic diversification, and taking into consideration that poverty eradication and social and economic development are the first and overriding priorities of developing country Parties.

Parties agree to enhance actions under this Agreement, including through strengthening institutional arrangements, and to adopt modalities and procedures for enhancing those arrangements. To this end the CMA shall establish a cooperative mechanism to address the adverse impacts of the implementation of response measures on developing country Parties, as included in decision -/CP.21.]]

{Unilateral measures}

17. *[*[Developed country Parties shall not resort to any form of unilateral measures against goods and services from developing country Parties on any grounds related to climate change, recalling the principles and provisions of the Convention, in particular its Article 3, paragraphs 1, 4 and 5, and Article 4, paragraphs 3, 5, 7, 8, 9 and 10, and taking into account the principles of equity, common but differentiated responsibilities and the obligations of developed country Parties to provide financial resources, transfer of technologies and capacity-building support to developing country Parties.]]

{REIOs}

18. [Parties, including regional economic integration organizations and their member States, may jointly communicate and[/or] implement their ### [detailing in their joint communication the combined level of ### and individual levels of the ### of each member State of that regional economic integration organization. If Parties acting jointly do so in the framework of, and together with, a regional economic integration organization, any alteration in the composition of the organization after adoption of this Agreement shall not affect existing ### under this Agreement. Any alteration in the composition of the organization shall apply only for the purposes of those commitments under Article 3 that are adopted subsequent to that alteration. If Parties act jointly to implement their ### in the framework of, and together with, a regional economic integration organization that is itself a Party to this Agreement, each member State of that regional economic integration organization individually and together with the regional economic integration organization shall, in the event of failure to achieve the total combined level of ###, be responsible for the level of its ### as communicated in accordance with this Article.]

{Cooperative approaches}

[Option 1:[11]

19. Parties acknowledge the importance of [cooperation in][cooperative approaches for] implementing and enhancing the ambition of climate action [at the international level].

19alt. Parties may also cooperate in the implementation of ###.

[19bis. Where cooperative approaches involve the use of internationally transferred mitigation outcomes towards ###, Parties participating shall [safeguard] [promote] sustainable development and environmental integrity and shall apply robust accounting to ensure, inter alia, that double counting is avoided, taking into account relevant guidance adopted for this purpose by the CMA [taking into account guidance adopted at the national level].]

[19ter. A share of proceeds for adaptation shall apply.]

Option 2:

19. Cooperative approaches of Parties, based on Article 4.7 of the Convention, must ensure the enhancement of mitigation outcomes together with adaptation co-benefits to be verified internationally but non-transferrable.]

{International transport emissions}

20. **[**Parties [shall][should][other] pursue the limitation or reduction of greenhouse gas emissions from international aviation and marine bunker fuels, working through the International Civil Aviation Organization and the International Maritime Organization, respectively, with a view to agreeing concrete measures addressing these emissions, including developing procedures for incorporating emissions from international aviation and marine bunker fuels into low-emission development strategies.]

[Article 3 bis] *(REDD-PLUS)*

1. [Mechanisms for forest mitigation and adaptation are] [A REDD-plus mechanism is] hereby defined.
2. The REDD-plus mechanism consists of relevant decisions of the COP, including decisions 9/CP.19 to 15/CP.19 and decision -/CP.21.
3. The purpose of the REDD-plus mechanism shall be to incentivize the reduction of emissions from deforestation and forest degradation and to promote the conservation and sustainable management of forests and enhancement of forest carbon stocks in developing countries, while enhancing the non-carbon benefits of the multiple functions of forests, including alleviating poverty and building ecosystem resilience.
4. [The Joint Mitigation and Adaptation Mechanism (JMA) is established to support the integral and sustainable management of forests as an alternative to results-based payments, in accordance with decision X/CP.21.]

[Article 3 ter[12]] *(MECHANISM TO SUPPORT SUSTAINABLE DEVELOPMENT)*

{Proposed Mechanism 1}

1. **[**[Establishes a multi window mechanism][Establishes a framework for sustainable development mechanisms][A mechanism to support sustainable development in [developing country] Parties is hereby established] under the authority and guidance of the CMA, shall be supervised by a body designated by the CMA, and shall aim to:
   (a) Promote sustainable development in developing country Parties;
   (b) Incentivise and facilitate participation in mitigation action by public and private entities authorised by a Party;
   (c) [Enhance mitigation ambition by developing country Parties, by incentivising supplementary voluntary climate action, beyond their ###][Fully respect the mitigation contributions of participating Parties to ensure that the global mitigation effort is not undermined];
   (d) [Provide for net global emission reductions through the cancellation of a share of units generated, transferred, used or acquired];

[11] Note connection to Article 3.10 and Article 9 and Article 11

[12] Explanatory Note: Two mechanisms are proposed below as (i) and (ii), each with the alternative option of no mechanism. The two mechanisms proposed are not presented as options to each other.

(e) [Assist Parties with a ### that reflects an absolute target in relation to a base year to fulfil their ###, through the use of mitigation outcomes from mitigation activities in developing countries][Consider the variety and dynamics of national circumstances of Parties];

(f) [Ensure environmental integrity of Parties' cooperative mitigation actions, including ensuring that such mitigation shall not be claimed more than once, in accordance with accounting guidance elaborated under Article [3.10]].]

2. [The CMA shall ensure that a share of the proceeds from certified project activities are used to cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.]

3. [The CMA shall adopt modalities and procedures for the first window of the above mentioned mechanism building on the mechanism defined under [Article 12][Article 6] of the Kyoto Protocol and related decisions of the CMP.]

{Proposed Mechanism 2}

1. [Establishes a mechanism to support holistic and integrated approaches to sustainable development in harmony with nature to be available to assist developing country Parties in fulfilling their ### including in a balanced manner mitigation, adaptation, provision of finance, technology transfer and capacity building. This mechanism shall be under the authority and guidance of the CMA, and shall be supervised by a body designated by the CMA, and aim to:

(a) Enhance of mitigation and adaptation ambition and the provision or mobilization of public financing technology transfer and capacity building in an integrated manner for climate action;

(b) Enhance non-market-based approaches and enable participation in joint cost-effective mitigation and adaptation actions by public and private entities acting under the responsibility of a Party.

(c) Support the implementation of the joint mitigation and adaptation approach for the integral and sustainable management of forests as an alternative policy approach to results-based payments.

(d) Fully respect mitigation contributions of participating Parties to ensure that the global mitigation effort is not undermined.]

2. [The CMA shall adopt modalities and procedures for the mechanism referred above on its first session.]

Article 4 *(ADAPTATION)*

1. Parties hereby establish the global goal of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, [in accordance with the objective, principles and provisions of the Convention, including common but differentiated responsibilities and respective capabilities,] with a view to [contributing to sustainable development] [and] [ensuring adaptation in the context of the goal of holding the increase in the global average temperature [below 2 °C][below [2 or] 1.5 °C] referred to in Article 2].

2. Parties recognize that adaptation is a global challenge faced by all with local, subnational, national, regional and international dimensions, and that it is a key component of and contribution to the long-term global response to climate change to protect people, livelihoods and ecosystems[, taking into account the urgent and immediate needs of those developing countries that are particularly vulnerable].

3. [The global goal for adaptation shall be the basis for, inter alia:

(a) Assessment of the adequacy of support from developed country Parties to developing country Parties. This assessment will be undertaken through strengthened measurement, reporting and verification of support;

(b) Recognition of the adaptation efforts of developing country Parties;

(c) Recognition of increased adaptation needs and associated costs in the light of mitigation efforts, taking into account the need for adaptation regardless of the level of mitigation reached, and also taking into account the relationship between aggregate mitigation ambition, associated climate change impacts, and adaptation needs and cost, while recognizing there are limits to adaptation.]

4. **[**Parties recognize that adaptation [will][may] be needed regardless of the level of mitigation reached [and that greater aggregate levels of mitigation can reduce the need for additional adaptation efforts.]]

5. Parties acknowledge that adaptation action should follow a country-driven, gender-responsive, participatory and fully transparent approach, taking into consideration [human rights,][the rights of people under occupation,]

vulnerable groups, communities and ecosystems, and should be based on and guided by the best available science and, as appropriate, traditional, indigenous peoples knowledge and local knowledge systems, with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions, where appropriate.

6. Parties further recognize the importance of international cooperation and support for adaptation efforts and the importance of taking into account the needs of those developing countries that are particularly vulnerable, recognizing the particular vulnerabilities of the least developed countries (LDCs) and small island developing States (SIDS).

7. Parties [shall][should] enhance their cooperation for enhancing action on adaptation, taking into account the Cancun Adaptation Framework, including with regard to:

   (a) Sharing information, good practices, experiences and lessons learned, including, as appropriate, as these relate to the science, planning, policies and implementation of adaptation actions;

   (b) Strengthening institutional arrangements, including those under the Convention, to support the synthesis of relevant information and knowledge and the provision of technical support and guidance to the Parties;

   (c) Strengthening scientific knowledge on climate, including research and systematic observation of the climate system, in a manner that informs the development and delivery of climate services and to support decision-making;

   (d) [Assessment of the [effectiveness][adequacy] of support [referred to in paragraph 3(a)] of this Article with a view to ensuring transparency and accountability;]

   (e) Assisting [developing] country Parties to identify effective adaptation practices, adaptation needs, priorities, support provided and received for adaptation actions and efforts, and challenges and gaps in a manner consistent with encouraging good practices;

   (f) Improving the effectiveness and durability of adaptation actions.

8. Encourages United Nations agencies to support the efforts of Parties to implement the actions referred to in paragraph 7 of this Article, taking into account the provisions of paragraph 5 of this Article.

9. Each Party should engage in the implementation of adaptation planning processes and actions, including the development or enhancement of relevant plans, policies and/or contributions, which may include:

   (a) Implementation of adaptation actions, undertakings and/or efforts;

   (b) The process to formulate and implement national adaptation plans;

   (c) Assessment of climate change impacts and vulnerability with a view to formulating nationally determined prioritized actions, taking into account vulnerable people, places and ecosystems;

   (d) Strengthening enabling environments for the implementation of adaptation;

   (e) Monitoring, evaluating and learning from adaptation plans, policies, programmes and actions;

   (f) Building resilience of socioeconomic and ecological systems, including through economic diversification and sustainable management of natural resources.

10. Each Party may submit an adaptation communication [or communications on actions, undertakings and/or efforts on adaptation referred to in paragraph 9(a) and (b) of this Article], which may include its priorities, support needs, plans and actions.

11. The adaptation communication [or communications on actions, undertakings and/or efforts on adaptation] referred to in paragraph 10 of this Article may be:

   (a) Submitted independently, as a component of or in conjunction with another communication, including a national adaptation plan[, an intended] nationally determined contribution and/or a national communication;

   (b) Updated or submitted [periodically] [in conjunction with mitigation cycles].

12. [The adaptation communication [or communications on action, undertakings and/or efforts on adaptation] referred to in paragraph 10 of this Article [shall][may] be [recorded in a registry][made publicly available by the secretariat [on the UNFCCC website]] [in accordance with modalities to be decided by the [CMA][CMP] at its first session].]

13. [Developing country Parties should receive continuous and enhanced international support for the implementation of Article 4, paragraphs 9–11, in accordance with the provisions of Articles 6, 7 and 8.]

14. **[**There shall be a [high-level session][global stocktake] on adaptation every [X] years, with the purpose of [enhancing the implementation of adaptation action based on the adaptation communication [or communications on action, undertakings and/or efforts on adaptation] referred to in paragraph 9 of this Article, assessing the adequacy of support and recognizing the adaptation efforts of developing country Parties], guided by modalities to be adopted by the [CMA][CMP] at its first session.]

15. [[The AC, the LEG, the AF, the GCF, the LDCF, the SCCF, the TEC, the CGE, and other relevant bodies][institutional arrangements for adaptation] under the Convention shall serve this Agreement. The CMA shall, based on a review of institutional arrangements under the Convention, further elaborate the adaptation framework for this Agreement in order to enhance its coherence and effectiveness, building on, consolidating and coordinating institutional arrangements relevant to adaptation under the Convention.]

Suggested paragraphs for Article 6:

X. [[Developed country Parties][Parties included in Annex II to the Convention] shall provide developing country Parties with long-term, scaled-up, predictable, new and additional finance, technology and capacity-building for the implementation of Article 4, paragraphs 9, 10 and 11[, in accordance with [the relevant provisions][Article 4] of the Convention,] recognizing the urgent and immediate needs and special circumstances of developing country Parties, especially those that are particularly vulnerable.]

Y. [Developed country Parties shall communicate on their provision of support to developing countries.]

Article 5 *(LOSS AND DAMAGE)*

Option I: The following text to be included as Article 5 *(Loss and Damage)*

Option II: The following text to be part of Article 4 alongside adaptation provision

1. [The Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts shall serve this Agreement.

2. Upon the completion of its review at the twenty-second session of the COP,[13] the Warsaw International Mechanism shall be subject to the authority and guidance of the CMA and supported through the Financial Mechanism of the Convention.

3. A climate change displacement coordination facility shall be established under the [Warsaw International Mechanism][CMA] to help coordinate efforts to address climate change induced displacement, migration and planned relocation.

4. A process to develop approaches to address irreversible and permanent damage resulting from human-induced climate change will be initiated under the [Warsaw International Mechanism][CMA] with a view to completing this process within four years.]

Article 6 *(FINANCE)*

1. **Option 1:** [Over time, finance flows should be consistent with [the transformation to][a pathway towards] low-emission and climate-resilient [societies and economies][development], in the context of countries' sustainable development priorities and efforts to eradicate poverty.]

   Option 2: [Climate finance, as defined in Article 1 of this Agreement, shall be provided from developed country Parties and other Parties included in Annex II of the Convention in the context of developing country Parties' needs, sustainable development priorities, food security and efforts to eradicate poverty.]

2. **Option 1:** [[Developed country Parties [and other developed country Parties included in Annex II to the Convention][and Parties in a position to do so] [should take the lead and]][All Parties in a position to do so] [shall][should][other] provide [support][[new and additional] financial resources] to assist developing country Parties with respect to both mitigation and adaptation [as well as addressing loss and damage] [and others in a position to do so should complement such efforts].]

   Option 2: [Developed country Parties and other developed Parties included in Annex II to the Convention shall provide new and additional, adequate, predictable, accessible, sustained and scaled-up financial resources to developing countries to enhance actions with respect to both mitigation and adaptation to contribute to the

[13] Decision 2/CP.19, paragraph 15.

achievement of the [objective][purpose] of this Agreement, based on the principles and in accordance with the provisions of the Convention.]

Option 3: [Parties in a position to do so, including developed country Parties, should provide support to assist developing country Parties in need of support with respect to both mitigation and adaptation.]

3. [Parties should integrate climate considerations, including resilience, into international development assistance.]

4. **Option 1: [**All Parties shall take action to mobilize, and/or facilitate the mobilisation of, climate finance in line with their respective and evolving responsibilities and capabilities. Some Parties may need support in order to take action.]

[The actions taken by Parties in the mobilization of climate finance shall reflect and be dynamically adapted to future changes in needs, developments and environmental and economic realities, reflecting evolving capabilities and responsibilities.]

Option 2: [Developed country Parties and other Parties included in Annex II to the Convention shall mobilize financial resources beyond their previous efforts, supporting country-driven strategies, and taking into account the needs and priorities of developing country Parties.]

Option 3: [As part of a shared effort, Parties should cooperate to promote the mobilization of climate finance from a wide variety of sources, instruments and channels, including public, private, bilateral, multilateral, domestic, and international.]

5. [Parties should strive to improve enabling environments and policy frameworks to attract and mobilize climate finance, noting that cooperative action and support may enhance such efforts.]

6. [Parties should mobilize enhanced results-based payments for verifiable achieved emission reductions related to existing approaches under the Convention.]

7. [Parties should reduce international support for high-emission [and maladaptive] investments and enhance international support for low-emission and climate-resilient investments.]

8. [Parties recognise that the appropriate pricing of greenhouse gas emissions in its many forms, is an important instrument for the reorientation of investment and finance flows consistent with a pathway towards low emission and climate resilient economies and societies.] *{Placement proposal: to be moved to section on mitigation}*

9. **Option 1:** [Parties recognize the role of a wide variety of sources, public and private, bilateral and multilateral, including alternative sources.]

Option 2: [Public funds from developed country Parties, distinct from Official Development Assistance, will be the main source of finance [indemnization mechanism based on historical responsibilities], noting that it may include a wide variety of sources, public and private, bilateral and multilateral, including additional sources. In the mobilization of finance from various sources, Parties shall abide by the principles of fiscal sovereignty and avoid incidence on developing country Parties[, particularly disguised distortions to trade].]

10. **Option 1:** [The mobilization of climate finance [shall][should][other] be scaled up [in a predictable and transparent manner] [beyond previous efforts] [from USD 100 billion per year] from 2020[, recognizing the important role of the Green Climate Fund in the scaling up of financial resources for the implementation of this agreement, as well as other multilateral mechanisms and other efforts].]

Option 2: [The provision and mobilization of financial resources by developed country Parties and other developed Parties included in Annex II shall represent a progression beyond their previous efforts towards achieving short-term collective quantified goals for the post 2020 period to be periodically established and reviewed. Financial resources shall be scaled up from a floor of US$100 billion per year, including a clear burden-sharing formula, and in line with needs and priorities identified by developing country Parties in the context of contributing to the achievement of the [objective][purpose] (Article 2/XX) of this Agreement. It shall take into account an equitable regional distribution of financial resources and a gender-sensitive approach, and include the implementation of Articles 5 and 6 of the Convention.]

Option 3: [As part of a shared mobilization effort Parties should, in accordance with paragraphs X-Y, enhance the scale and effectiveness of climate finance by: mobilizing climate finance from a wide variety of instruments and channels; provide, when in a position to do so, support to developing countries in need of support; appropriately prioritize support; improve enabling environments; integrate climate considerations into international development assistance; and reduce international support for high-emissions investments.]

11. The provision of financial resources [should][shall] aim to achieve a balance between adaptation and mitigation, taking into account country-driven strategies, and the priorities and needs of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, including LDCs, SIDS, and Africa, considering the need for public and grant-based resources for adaptation.

12. [[Developed country Parties][Parties included in Annex II to the Convention] shall provide developing countries with long-term, scaled-up, predictable, new and additional finance, technology and capacity-building for the implementation of Article 4, paragraphs 8–10[, in accordance with [the relevant provisions][Article 4] of the Convention,] recognizing the urgent and immediate needs and special circumstances of developing country Parties, especially those that are particularly vulnerable.]

13. [The CMA shall ensure that adequate support is available to the International Mechanism to address Loss and Damage as defined in Article (XX), as well as to promote and support the development and implementation of approaches to address irreversible and permanent damage resulting from human-induced climate change.]

14. [The provision of financial resources shall ensure facilitated and enhanced direct access, pursue a country-driven approach, through simplified procedures, and readiness support to developing countries [especially those countries that are particularly vulnerable to the adverse effects of climate change], including to capacity-constrained developing countries, LDCs, SIDS and Africa. It shall likewise ensure adequacy and predictability of resources, and avoid double counting.]

15. [[Parties and the institutions serving this Agreement should simplify procedures for accessing financial resources to and improving readiness for developing country Parties, [including][in particular] the LDCs and SIDS][In the provision of support, and in order to enhance the impact and country-driven approach of such support, readiness and country programme measures [shall][should] be prioritized. The institutions serving this agreement [shall][should] enhance the delivery of resources for readiness and simplify approval procedures for accessing finance [by developing countries], in particular for LDCs, SIDS, and African States [and other vulnerable countries], in a coordinated manner].] *{Placement proposal: to be moved to decision section}*

16. **Option 1:** [[Developed country] Parties [and other developed Parties included in Annex II] [shall][should][other] [periodically][biennially] communicate [relevant, indicative] information on [the [provision] [and mobilization] [and implementation] of [financial resources][support to developing countries], including [available] quantitative and qualitative information on the] projected [efforts to mobilize [and attract] climate finance][levels of public [climate finance][financial resources to be provided to developing country Parties]].]

    Option 2: [Developed country Parties and other developed Parties included in Annex II shall biennially communicate on the provision and mobilization of financial resources, including quantitative and qualitative information on the projected levels of public financial resources to be provided to developing country Parties.]

    Option 3: [Parties should periodically communicate relevant, indicative information about their plans related to paragraphs X-Y, as appropriate.]

17. [The [stocktake shall take into account available information by [developed country] Parties and Agreement bodies on efforts related to climate finance][CMA shall facilitate the communication of finance efforts for the stocktake referred to in Article 10, taking into account the [annual reports][biennial assessment] of the Standing Committee on Finance].] *{Pending outcome of discussions on Article 10}*

18. [Developed country Parties and other developed Parties included in Annex II to the Convention shall at least biennially provide transparent, complete, consistent, comparable and accurate information on financial resources provided and mobilized through public interventions to developing country Parties, in accordance with guidelines to be adopted by the CMA at its first session, including through a clear definition of climate finance as stipulated in Article 1 of this agreement.] *{Note: some of the issues pertaining to specific reporting modalities as identified in this paragraph may be moved to Article 9}*

19. The Financial Mechanism established by Article 11 of the Convention, including [the Green Climate Fund and the Global Environment Facility as] its operating entities [and related funds], shall serve as the financial mechanism of this Agreement.

[**Option 1** *(Paragraph 20)*:

20. [The CMA shall provide guidance, for consideration by the COP, on the policies, programme priorities, and eligibility criteria of the operating entities of the Financial Mechanism, acknowledging that the relevant decisions of the COP agreed before adoption of this Agreement shall apply mutatis mutandis.]

Option 2: *(Paragraphs 20-22)*:

20. [The guidance to the entity or entities entrusted with the operation of the financial mechanism of the Convention in relevant decisions of the COP, including those agreed before the adoption of the agreement, shall apply mutatis mutandis to the Financial Mechanism of this Agreement.

21. The existing operating entities of the Financial Mechanism (the Green Climate Fund and the Global Environment Facility, including the Special Climate Change Fund and the Least-Developed Countries Fund) shall serve this Agreement. Other funds may be established under this agreement.

22. The Adaptation Fund Board, established by decision 1/CMP.3 shall be designated as an operating entity entrusted with the operation of the financial mechanism, referred to in Article xx, for the implementation of this Agreement.]]

Article 7 *(TECHNOLOGY DEVELOPMENT AND TRANSFER)*

1. All Parties[, in accordance with the principles and provisions of the Convention, in particular Article 4 [and Article 11]], noting the importance of technology for the implementation of mitigation and adaptation actions under this Agreement and recognizing existing deployment and dissemination efforts, [shall][should] strengthen cooperative action [to accelerate and upscale] [on] [technology development and transfer] [through] [, inter alia:

   (a) [Improving endogenous capacities and enabling environments according to nationally determined needs and priorities, in accordance with Article 4, paragraph 5, of the Convention];

   (b) [Addressing barriers [in accessing to][for] the transfer of safe, appropriate and environmentally and socially sound technologies [by developing countries];]

   (c) Fostering cooperative approaches to research and development].

2. Parties share a long-term vision on the importance of fully realizing technology development and transfer in order to improve resilience to climate change and to reduce GHG emissions.

3. A technology framework is hereby established to provide overarching guidance to the work of the Technology Mechanism in promoting and facilitating enhanced action on technology development and transfer in order to support the implementation of this Agreement, in pursuit of the long-term vision referred to in paragraph 2 above.

4. **[**In accordance with Article 4, paragraph 5, of the Convention, developed country Parties shall provide financial resources to address barriers created by policies and intellectual property rights (IPRs) and facilitate access to and the deployment of technology, including, inter alia, by utilizing the Financial Mechanism and/or establishing a funding window under the GCF to meet the full costs of IPRs of environmentally sound technologies, know-how and such technologies will be provided to developing country Parties free of cost in order to enhance their actions to address the adverse effects of climate change.]

5. The Technology Mechanism shall serve this Agreement [and shall be strengthened in line with its mandate for this purpose].

6. **Option 1:** Developing country Parties are eligible for support in the implementation of this Article.

   Option 2: [In accordance with Article 4, paragraphs 3[and 5][, 5 and 9], of the Convention,] developed country Parties and other Parties included in Annex II to the Convention shall [continue to provide regular reports] [regularly prepare, communicate and implement their commitments on the support of technology provisions for [developing country] Parties] [provide enhanced support], including financial support, for strengthening cooperative action and the implementation of the technology framework through the Technology Mechanism [and the Financial Mechanism]. [The financial support shall be made available through, inter alia, the Financial Mechanism.] [The overall implementation of the commitments will be assessed periodically through a global stocktake in accordance with Article 10 of this Agreement.]

   Option 3: [Developed country] [All] Parties shall regularly communicate the progress [of implementation] [made in implementing the provisions] [pertaining to the financial provisions] and support for technology development and transfer in accordance with Articles 6 and 9 of this Agreement [, taking into account the provisions of the Convention] [in a measurable, reportable and verifiable manner]. [The overall implementation of the commitments will be periodically assessed through a global stocktake in accordance with Article 10 of this Agreement.]

7. **[**Developed country Parties and other Parties included in Annex II to the Convention shall provide support for the research, development and application of environmentally sound technologies and facilitate the transfer of and access to such technologies for developing country Parties, including by, inter alia, strengthening

cooperative action, providing financial resources to address barriers caused by the absence of domestic research and development capability and innovations, and enhancing access to environmentally sound technologies and know-how.]

Article 8 *(CAPACITY-BUILDING)*

1. Capacity-building under this Agreement should enhance the capacity and ability of:

   Option 1: [countries];

   Option 2: [developing country Parties, in particular countries with the least capacity, such as LDCs and SIDS and African countries];

   Option 3: [developing country Parties, in particular countries with the least capacity, such as LDCs and SIDS and African countries, in accordance with the principles and provisions of the Convention],

   [to take effective climate change action, including, inter alia, to implement adaptation and mitigation actions, and facilitate technology development, dissemination and deployment, access to climate finance, relevant aspects of education, training and public awareness, and the transparent, timely and accurate communication of information.]

2. Capacity-building should be country-driven, based on and responsive to national needs, and foster country ownership of Parties, [in particular, for developing country Parties,] including at the national, subnational and local levels. Capacity-building should be guided by lessons learned, including those from capacity-building activities under the Convention, and should be an effective, iterative process that is participatory, cross-cutting and gender-responsive.

3. [All Parties should cooperate to enhance the capacity of developing country Parties to implement this Agreement. Developed country Parties should enhance support for actions for capacity-building in developing countries].

4. [All Parties enhancing the capacity of developing country Parties to implement this Agreement, including through regional, bilateral and multilateral approaches, shall regularly communicate on these actions or measures on capacity-building. Developing country Parties shall regularly communicate progress made on implementing capacity-building plans, policies, actions or measures to implement this Agreement].

5. [Institutional arrangements under the Convention shall be enhanced, as appropriate, in support of capacity-building for the implementation of this Agreement]. [In order to further enhance capacity-building in accordance with this Agreement, an international capacity-building mechanism is hereby established to serve the Agreement.]

Article 8 bis

Parties shall cooperate in taking measures, as appropriate, to enhance climate change education, training, public awareness, public participation and public access to information, recognizing the importance of these steps with respect to enhancing actions under this Agreement.

Article 9 *(TRANSPARENCY)*

1. **Option 1:** A robust transparency framework covering both action and support, differentiated between developed and developing countries, building on the arrangements under the Convention, related decisions of the COP and mechanisms established by the Cancun Agreements (decision 1/CP.16), applicable to all Parties, and providing flexibility to developing countries is hereby established.

   Option 2: A unified and robust transparency framework, covering both action and support, with built-in flexibility to take into account Parties' differing capacities, and applicable to all Parties is hereby established.

   Option 3: A robust, tiered transparency framework covering both action and support, applicable to all Parties, based on self-differentiation with no backsliding and on national capabilities and intended nationally determined contributions, and that builds on and enhances existing arrangements under the Convention and decision 1/CP. 16 is hereby established.

   Option 4: Building on existing arrangements under the Convention, a transparency framework for action and support that takes into account Parties different capacities and is applicable to all Parties is hereby established.

2. The transparency framework shall provide flexibility in the implementation of the provisions of this Article to developing country Parties in the light of their capabilities. The modalities, procedures and guidelines referred to in paragraph 6 of this Article shall reflect such flexibility.

3. The transparency framework shall be guided by the principles of the Convention and building on the provisions and arrangements under the Convention, recognizing the special circumstances of the least developed countries and small island developing States, and be implemented in a facilitative, non-intrusive, non-punitive manner, respectful of national sovereignty, and avoid placing undue burden on Parties and the secretariat.

4. The purpose of the framework for transparency of action is to:

   (a) Provide a clear understanding of climate change actions in the light of the objective as set by Article 2 of the Convention;

   (b) Provide a clear understanding of the anthropogenic emissions by sources and removals by sinks of individual Parties;

   (c) Facilitate understanding of global aggregate emissions and removals to inform the global stocktake under Article 10;

   (d) Ensure clarity and tracking of progress made towards {insert the relevant phrase from outcome of Article 3.2} and achieving individual Parties' respective mitigation {insert the relevant phrase from outcome of Article 3.2} under Article 3;

   (e) Provide clarity on Parties' adaptation actions under Article 4, including good practices, priorities, needs and gaps.

5. The purpose of the framework for transparency of support is to:

   (a) Provide a clear understanding of the support provided and received by relevant individual Parties in the context of climate change actions under Articles 3 and 4;

   (b) Achieve, to the extent possible, a full overview of aggregate financial support provided, to inform the global stocktake under Article 10;

   (c) Ensure clarity and tracking of progress made by developed country Parties in providing support in accordance with Articles 6, 7 and 8;

   (d) Ensure clarity and tracking of support needed and received by developing country Parties in accordance with Articles 6, 7 and 8;

   (e) Ensure the avoidance of double counting of financial resources provided.

6. **Option 1:** Each Party, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives, and circumstances, shall provide transparent, accurate, complete, consistent, and comparable information in accordance with guidelines referred to in paragraph 6 of this Article on:

   Option 2: Each Party shall regularly provide the following information in accordance with guidelines referred to in paragraph 6 of this Article:

   (a) Its national inventory of anthropogenic emissions by sources and removals by sinks of greenhouse gases;

   (b) Projections of anthropogenic emissions by sources and removals by sinks of greenhouse gas;

   (c) Progress made towards and achieving individual Parties' respective mitigation {insert the relevant phrase from outcome of Article 3.2} under Article 3*;*

   (d) Climate change impacts and actions taken to build resilience and reduce vulnerability, and progress on adaptation actions under Article 4*;*

   (e) Support provided and received, as relevant, *including specific information required under Article 6.13, 6.14, 7 and 8.*

7. **Option 1**: The information provided by each Party as required under this Article shall be subject to a technical expert review, with additional flexibility to be given to LDCs and SIDS as requested by them, in accordance with [common] guidelines and procedures adopted by the CMA.

   The review shall provide a thorough, objective and comprehensive technical assessment of the Party's implementation and achievement of its nationally determined mitigation {insert the relevant phrase from outcome of Article 3.2} and other requirements of the Agreement, analyze the extent to which the Parties reporting is in line with the guidelines adopted by the CMA, and identify any areas for improvement in reporting

and possible capacity building, in consultation with the Party concerned. The technical expert review shall be carried out by an expert review team that shall produce a report, to be consulted with the Party concerned, for publication by the secretariat and consideration by the CMA.

[The report shall identify any issues related to compliance.] {review following outcomes from Article 11} A multilateral and facilitative examination shall consider the information above.

Option 2: All information provided by developed country Parties, and shall be reviewed through a robust technical review process followed by a multilateral assessment process, and result in a conclusion with consequences for compliance;

All the information provided by developing country Parties should be analyzed through a technical analysis process followed by a multilateral facilitative sharing of views, result in a summary report, in a manner that is nonintrusive, non-punitive and respectful of national sovereignty, according to the level of support received from developed country Parties.

8. The CMA shall, at its first session, building on experience from the arrangements related to transparency under the Convention, and elaborating on the provisions in this Article, adopt [common] modalities, procedures and guidelines, as appropriate, for the transparency of action and support. {Placeholder to revisit this para pending outcomes of discussion on accounting}

9. The transparency arrangements under the Convention, including national communications, biennial reports and biennial update reports, international assessment and review (IAR) and international consultation and analysis (ICA), shall form part of the experience drawn upon for the development of modalities, procedures and guidelines under paragraph 8 of this Article.

10. Support shall be provided to developing countries for the implementation of paragraphs 6 and 7 of this Article.

11. [Developed country Parties shall provide support to developing country Parties in the implementation of this Article.] {to be revised pending global solution in Article 6}

12. Support shall also be provided for the building of transparency-related capacity of developing countries on a continuous basis.

Article 10 *(GLOBAL STOCKTAKE)* [14,15]

1. The CMA shall periodically assess the [overall][collective] progress towards achieving the purpose[16] of this Agreement and its long-term goals. It shall do so in a comprehensive and facilitative manner, considering mitigation, adaptation and the means of implementation and support[17].

2. The CMA shall undertake its first global stocktake in 2024 and every five years thereafter unless otherwise decided by the CMA.

3. The outcome of the global stocktake shall inform Parties in [undertaking their efforts and] enhancing their successive actions and support, as appropriate, [and in [preparing][and][finalizing] any successive INDC18] in accordance with relevant provisions of this Agreement, with a view to achieving the purpose and long-term goals [and increasing the ambition] of this Agreement in light of [the best available science][and][equity] [and in accordance with the principle of common but differentiated responsibilities and respective capabilities, in light of different national circumstances].

Article 11 *(FACILITATING IMPLEMENTATION AND COMPLIANCE)*

Option 1: ***(paragraphs 1 to 4)***

14 The current text is dependent on the way other Articles of the Agreement develop through the negotiations. It may be necessary to revise the text accordingly.

15 Support for developing countries' participation in the stocktake should be taken into consideration in the appropriate section.

16 This language is dependent on a link to the Convention in Article 2, otherwise a reference to the [ultimate] objective of the Convention may be needed.

17 If references to differentiation are not included in Articles 2, 3, 4, 5, 6 and 7, such language may be needed in this Article.

18 Placeholder to reference the Parties' actions as related to Articles 3,4,5,6 and 7.

1. A [mechanism][committee] [with differentiation between developed country Parties and developing country Parties][applicable to all Parties] to promote [[and address] compliance with] and facilitate implementation [of the provisions of this Agreement], which shall be expert-based [and facilitative] in nature, and which shall act in a manner that is transparent, non-punitive and non-adversarial [for developing country Parties][for all Parties], is hereby established. [It shall pay particular attention to the respective national capabilities and circumstances of Parties.]

2. The objective of the [mechanism][committee] referred to in paragraph 1 of this Article is:

Option (**a):** To promote [and][,] facilitate [and incentivize] effective implementation of [and compliance with] [Articles [3] [, 4, 6, 7, 8] and [9] of] this Agreement.

Option (**b):** [To promote compliance][To address cases of non-compliance] by developed country Parties[, including through the development of an indicative list of consequences], taking into account the cause, type, degree and frequency of non-compliance, and to facilitate implementation by developing country Parties through provision of adequate financial resources and transfer of technology.

3. The [mechanism][committee] shall report annually to the CMA and shall operate under modalities and procedures adopted by the CMA at its first session. The [mechanism][committee] shall elaborate its rules of procedure, which shall be subject to approval by the CMA at its second session.

4. [Placeholder for text by Parties on composition]

Option 2:

An International Tribunal of Climate Justice is hereby established to address cases of non-compliance with the commitments of developed country Parties on mitigation, adaptation, provision of finance, technology development and transfer, capacity-building, and transparency of action and support, including through the development of an indicative list of consequences, taking into account the cause, type, degree and frequency of non-compliance.]

Article 12 *(CMA)*

1. The Conference of the Parties, the supreme body of the Convention, shall serve as the meeting of the Parties to this Agreement.
2. Parties to the Convention that are not Parties to this Agreement may participate as observers in the proceedings of any session of the Conference of the Parties serving as the meeting of the Parties to this Agreement. When the Conference of the Parties serves as the meeting of the Parties to this Agreement, decisions under this Agreement shall be taken only by those that are Parties to this Agreement.
3. When the Conference of the Parties serves as the meeting of the Parties to this Agreement, any member of the Bureau of the Conference of the Parties representing a Party to the Convention but, at that time, not a Party to this Agreement, shall be replaced by an additional member to be elected by and from among the Parties to this Agreement.
4. The CMA shall keep under regular review the implementation of this Agreement and shall make, within its mandate, the decisions necessary to promote its effective implementation. It shall perform the functions assigned to it by this Agreement and shall:
   (a) Establish such subsidiary bodies as deemed necessary for the implementation of this Agreement;
   (b) Exercise such other functions as may be required for the implementation of this Agreement.
5. The rules of procedure of the Conference of the Parties and the financial procedures applied under the Convention shall be applied mutatis mutandis under this Agreement, except as may be otherwise decided by consensus by the CMA.
6. The first session of the CMA shall be convened by the secretariat in conjunction with the first session of the Conference of the Parties that is scheduled after the date of entry into force of this Agreement. Subsequent ordinary sessions of the CMA shall be held in conjunction with ordinary sessions of the COP, unless otherwise decided by the CMA.
7. Extraordinary sessions of the CMA shall be held at such other times as may be deemed necessary by the CMA or at the written request of any Party, provided that, within six months of the request being communicated to the Parties by the secretariat, it is supported by at least one third of the Parties.

8. The United Nations, its specialized agencies and the International Atomic Energy Agency, as well as any State member thereof or observers thereto not party to the Convention, may be represented at sessions of the CMA as observers. Any body or agency, whether national or international, governmental or non-governmental, which is qualified in matters covered by this Agreement and which has informed the secretariat of its wish to be represented at a session of the CMA as an observer, may be so admitted unless at least one third of the Parties present object. The admission and participation of observers shall be subject to the rules of procedure referred to in paragraph 4(b) of this Article.

Article 13 *(SECRETARIAT)*

1. The secretariat established by Article 8 of the Convention shall serve as the secretariat of this Agreement.
2. Article 8, paragraph 2, of the Convention on the functions of the secretariat, and Article 8, paragraph 3, of the Convention on arrangements made for the functioning of the secretariat shall apply mutatis mutandis to this Agreement. The secretariat shall, in addition, exercise the functions assigned to it under this Agreement and by the CMA.

Article 14 *(SBSTA AND SBI)*

1. The Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation (SBI) established by Articles 9 and 10 of the Convention shall serve, respectively, as the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation of this Agreement. The provisions of the Convention relating to the functioning of these two bodies shall apply mutatis mutandis to this Agreement. Sessions of the meetings of the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation of this Agreement shall be held in conjunction with the meetings of, respectively, the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation of the Convention.
2. Parties to the Convention that are not Parties to this Agreement may participate as observers in the proceedings of any session of the subsidiary bodies. When the subsidiary bodies serve as the subsidiary bodies of this Agreement, decisions under this Agreement shall be taken only by those that are Parties to this Agreement.
3. When the subsidiary bodies established by Articles 9 and 10 of the Convention exercise their functions with regard to matters concerning this Agreement, any member of the bureaux of those subsidiary bodies representing a Party to the Convention but, at that time, not a Party to this Agreement, shall be replaced by an additional member to be elected by and from among the Parties to this Agreement.

Article 15 *(BODIES AND INSTITUTIONAL ARRANGEMENTS TO SERVE AGREEMENT)*

1. Subsidiary bodies or other institutional arrangements [and mechanisms] established by or under the Convention, in addition to those subsidiary bodies and institutional arrangements explicitly referred to in this Agreement, [shall] [may] serve this Agreement [unless otherwise decided by the CMA] [[upon a decision of the CMA]. [Such decision shall specify the functions to be exercised by such bodies or arrangements]].
2. The CMA may provide further guidance to those subsidiary bodies and institutional arrangements [including the functions to be exercised by such bodies and institutional arrangements] [including for members of such bodies and institutional arrangements nominated by Parties to the Convention that are not Parties to this Agreement] [to the extent that these bodies and institutional arrangements serve this Agreement].

Article 16 *(SIGNATURE AND INSTRUMENTS OF RATIFICATION, ACCEPTANCE, APPROVAL OR ACCESSION)*

1. This Agreement shall be open for signature and subject to ratification, acceptance or approval by States and regional economic integration organizations that are Parties to the Convention. It shall be open for signature at the United Nations Headquarters in New York from 22 April 2016 to 21 April 2017. Thereafter, the Agreement shall be open for accession from the day following the date on which it is closed for signature. Instruments of ratification, acceptance, approval or accession shall be deposited with the Depositary.
2. Any regional economic integration organization that becomes a Party to this Agreement without any of its member States being a Party shall be bound by all the obligations under this Agreement. In the case of regional economic integration organizations with one or more member States that are Parties to this Agreement, the organization and its member States shall decide on their respective responsibilities for the performance of their

obligations under this Agreement. In such cases, the organization and the member States shall not be entitled to exercise rights under this Agreement concurrently.

3. In their instruments of ratification, acceptance, approval or accession, regional economic integration organizations shall declare the extent of their competence with respect to the matters governed by this Agreement. These organizations shall also inform the Depositary, who shall in turn inform the Parties, of any substantial modification in the extent of their competence.

Article 17 *(FURTHER REQUIREMENTS AND DECISION-MAKING RIGHTS)*

[A Party to the Convention shall [submit] [communicate] to the secretariat when it deposits its instrument of ratification, acceptance, approval or accession a nationally determined [mitigation] [contribution] [commitment] [in accordance with Article 2bis] in order to become Party to the Agreement. [The nationally determined [mitigation] [contribution] [commitment] shall be legally binding on that Party upon entry into force of this Agreement for that Party.]]

Article 18 *(ENTRY INTO FORCE)*

1. This Agreement shall enter into force on the thirtieth day after the date on which at least [X] [50][55][100] [the ¾] Parties to the Convention [including all Annex I Parties] [and] [or] [on which Parties to the Convention accounting for [55][60][70][X] per cent of total [net] global greenhouse gas emissions in [[date][1990][2000][2010][2012]] have deposited their instruments of ratification, acceptance, approval or accession [whichever occurs first, coming into effect not earlier than 1 January 2020]][.][, with such Parties to the Convention accounting for X per cent of total [net] global greenhouse gas emissions [in [date] [1990][2000][2010][2012]] [but not earlier than 1 January 2020].]

2. [For the purposes of paragraph 1 of this Article, "total global [net] greenhouse gas emissions" [of such Parties] means the [total global [net anthropogenic] greenhouse gas emissions [and removals] as estimated by the data set used by the Intergovernmental Panel on Climate Change in its Fifth Assessment Report for analysis of emissions trends][most up-to-date amount communicated on or before the date of adoption of this Agreement by the Parties to the Convention either in their national communications submitted in accordance with Article 12 of the Convention or in their biennial reports or biennial update reports submitted in accordance with decision 1/CP.16 of the Conference of the Parties].]

3. For each State or regional economic integration organization that ratifies, accepts or approves this Agreement or accedes thereto after the condition[s] set out in paragraph 1 of this Article for entry into force [has] [have] been fulfilled, this Agreement shall enter into force on the thirtieth day after the date of deposit by such State or regional economic integration organization of its instrument of ratification, acceptance, approval or accession.

4. For the purposes of paragraph 1 of this Article, any instrument deposited by a regional economic integration organization shall not be counted as additional to those deposited by its member States.

Article 19 *(AMENDMENTS)*

1. The provisions of Article 15 of the Convention on the adoption of amendments to the Convention shall apply mutatis mutandis to this Agreement.

2. [Notwithstanding paragraph 1 of this Article, a Party may propose an adjustment [[to] [enhance] the efforts expressed by its [mitigation commitment] inscribed in] Annex [A or B] [or] [X] to this Agreement. A proposal for such an adjustment shall be communicated to the Parties by the secretariat at least three months before the session of the CMA at which it is proposed for adoption.]

3. [An adjustment proposed by a Party [to enhance] the efforts expressed by its [mitigation commitment] inscribed in Annex [A or B] [or] [X] to this Agreement shall be considered adopted by the CMA unless more than three fourths of the Parties present and voting object to its adoption. The adopted adjustment shall be communicated by the secretariat to the Depositary, who shall circulate it to all Parties, and it shall enter into force on 1 January of the year following the communication by the Depositary. Such adjustments shall be binding upon Parties.]

Article 20 *(ANNEXES)*

1. Annexes to this Agreement shall form an integral part thereof and, unless otherwise expressly provided for, a reference to this Agreement constitutes at the same time a reference to any annexes thereto. Such annexes shall

be restricted to lists, forms and any other material of a descriptive nature that is of a scientific, technical, procedural or administrative character.

2. The provisions of Article 16 of the Convention on the adoption and amendment of annexes to the Convention shall apply mutatis mutandis to this Agreement[, except in respect of the annex containing nationally determined mitigation commitments].

Article 21 *(SETTLEMENT OF DISPUTES)*

The provisions of Article 14 of the Convention on settlement of disputes shall apply mutatis mutandis to this Agreement.

Article 22 *(VOTING)*

1. Each Party shall have one vote, except as provided in paragraph 2 of this Article.
2. Regional economic integration organizations, in matters within their competence, shall exercise their right to vote with a number of votes equal to the number of their member States that are Parties to this Agreement. Such an organization shall not exercise its right to vote if any of its member States exercises its right, and vice versa.
3. [Without prejudice to the provisions of Article 15, paragraph 3, of the Convention, Parties shall make every effort to reach agreement on all matters by consensus. If such efforts to reach consensus have been exhausted and no agreement has been reached, a decision shall, as a last resort, be adopted by a three-fourths majority vote of the Parties present and voting.]

Article 23 *(DEPOSITARY)*

The Secretary-General of the United Nations shall be the Depositary of this Agreement.

Article 24 *(RESERVATIONS)*

No reservations may be made to this Agreement.

Article 25 *(WITHDRAWAL)*

1. At any time after three years from the date on which this Agreement has entered into force for a Party, that Party may withdraw from this Agreement by giving written notification to the Depositary.
2. Any such withdrawal shall take effect upon expiry of one year from the date of receipt by the Depositary of the notification of withdrawal, or on such later date as may be specified in the notification of withdrawal.
3. Any Party that withdraws from the Convention shall be considered as also having withdrawn from this Agreement.

Article 26 *(LANGUAGES)*

The original of this Agreement, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

[Placeholder for annexes]]

B. DRAFT DECISION

[The Conference of the Parties,

Pp1 *Recalling* decision 1/CP.17 on the establishment of the Ad Hoc Working Group on the Durban Platform for Enhanced Action,

Pp2 *Also recalling relevant* decisions of the Conference of the Parties, including decisions 2/CP.18, 1/CP.19 and 1/CP.20,

Pp3 *Welcoming* the outcome of "Transforming our world: the 2030 Agenda for Sustainable Development", in particular its goal 13, and the outcome of the Addis Ababa Action Agenda of the third International Conference on Financing for Development,

Pp4 *Recognizing* that climate change represents an urgent and potentially irreversible threat to human societies and the planet and thus requires the widest possible cooperation by all countries, and their participation in an effective and appropriate international response, with a view to accelerating the reduction of global greenhouse gas emissions,

Pp5 *Also* r*ecognizing* that climate change represents an urgent and potentially irreversible threat to human societies and that deep reductions in global emissions will be required in order to achieve the ultimate objective of the Convention and *emphasizing* the need for urgency to address climate change,

I. ADOPTION

1. *Decides* to adopt the Paris Agreement under the United Nations Framework Convention on Climate Change (hereinafter referred to as "the Agreement"), contained in the annex;
2. *Requests* the Secretary-General of the United Nations to be the Depositary of the Agreement and to have it open for signature in New York, the United States of America, from 22 April 2016 to 21 April 2017;
3. *Invites* the Secretary-General to convene a high-level signature ceremony for the Agreement on 22 April 2016;
4. *Also invites* all Parties to the Convention to sign the Agreement at the ceremony to be convened by the Secretary-General, or at their earliest opportunity, and to deposit their respective instruments of ratification, acceptance or approval, or instruments of accession, where appropriate, as soon as possible;
5. *Recognizes* that Parties to the Convention may provisionally apply all of the provisions of the Agreement pending its entry into force, and *requests* Parties to provide notification of any such provisional applications to the Depositary;
6. *Notes* that the work of the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP) in accordance with decision 1/CP.17, paragraph 4, has been completed;
7. *Decides* to establish, the Ad Hoc Working Group on the Paris Agreement (APA) under the same arrangements, mutatis mutandis, concerning the election of officers to the bureau of the ADP;
8. *Also decides* that the APA shall prepare for the entry into force of the Agreement and for the convening of the first session of the Conference of the Parties serving as the meeting of the Parties to the Agreement (CMA);
9. *Further decides* to oversee the implementation of the work programme resulting from the relevant requests contained in this decision;
10. *Requests* the APA to report regularly to the Conference of the Parties (COP) on the progress of its work and to complete its work by the first session of the CMA;
11. *Decides* that the APA shall hold its sessions starting in 2016 in conjunction with the sessions of the Convention subsidiary bodies and shall prepare draft decisions to be recommended through the COP to the CMA for consideration and adoption at its first session;

II. INTENDED NATIONALLY DETERMINED CONTRIBUTIONS

12. *Welcomes* the intended nationally determined contributions (INDCs) that have been communicated by Parties in accordance with decision 1/CP.19, paragraph 2(b);

13. *Reiterates* its invitation to all Parties that have not yet done so to communicate to the secretariat their INDCs towards achieving the objective of the Convention as set out in its Article 2 as soon as possible and well in advance of the twenty-second session of the Conference of the Parties and in a manner that facilitates the clarity, transparency and understanding of the INDCs;

14. *Requests* the secretariat to continue to publish the INDCs communicated by Parties on the UNFCCC website;

15. *Reiterates* its call to developed country Parties, the operating entities of the Financial Mechanism and any other organizations in a position to do so to provide support for the preparation and communication of the INDCs of Parties that may need such support;

16. *Takes note* of the synthesis report on the aggregate effect of INDCs communicated by Parties by 1 October 2015, contained in document FCCC/CP/2015/7;

17. [*Notes* with concern that the estimated aggregate greenhouse gas emission levels resulting from the INDCs in 2025 and 2030 do not fall within least-cost 2 ˚C scenarios, and that much greater emission reduction efforts than those associated with the INDCs will be required in the period after 2025 and 2030 in order to hold the temperature rise to below 2 ˚C or 1.5 ˚C above pre-industrial levels;]

18. [Also notes, in this context, the adaptation needs expressed by developing countries in their INDCs];

19. *Requests* the secretariat to update the synthesis report referred to in paragraph 16 above so as to cover all the information in the INDCs communicated by Parties pursuant to decision 1/CP.20 by 4 April 2016 and to make it available by 2 May 2016;

20. *[[Decides][Invites* the President of the COP] to convene a facilitative dialogue among Parties to take stock of the collective efforts of Parties in [2018][2019] in relation to progress towards the long-term goal referred to in Article 3, paragraph 1, of the Agreement and to inform the preparation of INDCs pursuant to Article 3, paragraph 8, of the Agreement;]

20bis. *Requests* the Intergovernmental Panel on Climate Change (IPCC) to provide a special report [in 2018] [in 2019] on the impacts of global warming of 1.5 °C above pre-industrial levels and the global greenhouse gas emission pathways required to achieve the long-term temperature goal;

III. DECISIONS TO GIVE EFFECT TO THE AGREEMENT

MITIGATION (RE-ARRANGED ACCORDING TO TOPIC)

{Collective long-term goal}

21. *[Requests [X] to* [Develop modalities to implement the distribution of a global carbon budget based on climate justice, considering historical responsibilities, ecological footprint, capabilities, state of development and population;]

{First communication}

22. [*Affirms* that if a Party that has communicated its first INDC before joining the agreement, the INDC communicated will be automatically recognized as its ### under this Agreement, unless otherwise decided by the Party concerned; and that if a Party that has not communicated its first INDC before joining the agreement, the INDC may be communicated by that Party at any time after joining the agreement.]

23. [*Acknowledges* that Parties may adjust the submission of their first ### to make it consistent with the rules and guidance for accounting for anthropogenic greenhouse gas emissions and removals pursuant to Article 3, paragraph 14 of the Agreement[, consistent with Article 3, paragraph 7, of the Agreement][, subject to the requirement that Parties ensure that there is no backsliding in the level of mitigation effort];

{Features}

24. [[*Decides*][*Notes*] that [Parties] [will][should][may] [developed countries will and others strive to] [developed countries will] communicate ###s that:

    (a) [Are quantified or quantifiable [or qualitative];]

(b) [Are unconditional, at least in part] [19] [, with developing countries able to communicate additional levels of mitigation action able to be implemented with support;] [noting that developing countries' ### may be expressed as an unconditional target and a conditional target based on the provision of finance and/or technology transfer and/or capacity-building;][20]

(c) [Consider maximizing adaptation co-benefits, and may include contributions in the form of co-benefits resulting from the Party's adaptation contributions and economic diversification plans;]

(d) [Strive to include all key categories of anthropogenic emissions and removals;]

(e) [Continue to include any sources, sink or activity that has been previously included, or explain any exclusion in that regard][and its impact][on the achievement of its ###]

(f) [Ensure that the NDMC is based on real and verifiable information, and that baselines are transparently defined;]

(g) [Use [common] Intergovernmental Panel on Climate Change (IPCC) metrics, guidance and guidelines for the estimation of greenhouse gas emissions and removals as agreed by the CMA;]

(h) [Take into account the relevant outcomes of the global stocktake and the process to facilitate implementation as set out in Articles 10 and 11, respectively;]

24bis. [*Notes* that Parties' ### may:

(a) [Prioritize actions that are immediately implementable, scalable and results oriented, including REDD-plus;]

(b) [Use a joint mitigation and adaptation approach for the integral and sustainable management of forests as an alternative policy approach to results-based payments.]]

{Information}

Option 1: *(paragraphs 25–25bis)*

25. *Decides* that in order to facilitate clarity, transparency and understanding, the information to be provided by Parties communicating their ### in accordance with Article 3, paragraph 6, of the [Agreement], [shall][should] include, [as appropriate,] inter alia, quantifiable information on the reference point (including, as appropriate, a base year), time frames and/or periods for implementation, scope and coverage, planning processes, assumptions and methodological approaches including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals, and how the Party considers that its ### is fair and ambitious, in light of its national circumstances, and how it contributes towards achieving the objective of the [Agreement] as set out in its Articles 2 and Article 3, paragraph 1, of the Agreement;

25bis. The [APA] will develop further guidance for the information to be provided by Parties to be adopted by the CMA.

Option 2: *(paragraphs 25–25bis)*

25. *Decides* that in order to facilitate clarity, transparency and understanding, the information to be provided by Parties communicating their ### in accordance with Article 3, paragraph 6, of the [Agreement], [shall][should] include, [as appropriate,] inter alia:

(a) Quantifiable information on the reference point (including, as appropriate, for the type of ###, a base year);

(b) Time frames and/or periods for implementation;

(c) [Pools, gases and key categories of emissions by sources and removals by sinks included in the ###;]

(d) The base year or baseline of commitment;

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[19] [South Africa wishes its reservation on the original text in brackets to be recorded: "We do not accept any unconditional part of contributions that are nationally determined, particularly if this is a precondition under Art. 17"]

[20] [South Africa wishes its reservation on the original text in brackets to be recorded: "We do not accept any unconditional part of contributions that are nationally determined, particularly if this is a precondition under Art. 17"]

(e) Assumptions, metrics, methodological approaches and key data sources, including those for projected baselines, if any and estimating and accounting for anthropogenic greenhouse gas emissions and removals;

(f) Assumptions and methodological approaches including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals;

(g) How the Party considers that its ### is fair and ambitious, in light of its national circumstances; and

(h) How it contributes towards achieving the objective of the [Agreement] as set out in its Article 2 and Article 3, paragraph 1, of the Agreement;

25bis. The [APA] will develop further guidance for the information to be provided by Parties to be adopted by the CMA.

{Housing}

26. *[Requests* the [SBI] to develop modalities and procedures for the operation and use of the registry referred to in Article 3, paragraph 13, of the Agreement, for consideration by the APA at its [X] session, with a view to the APA making a recommendation thereon to the CMA at its first session;]

27. *[Also requests* the secretariat to make available an interim registry in the first half of 2016 for the recording of ### submitted in accordance with Article 3 of the Agreement, pending the adoption by the CMA of the modalities and procedures referred to in paragraph 26 above;]

{Accounting}

28. *(Paired with Article 3.14 (accounting)):* [[Recognizing the importance of environmental integrity, transparency, accuracy, completeness, comparability, consistency and avoiding double counting,] Also decides [that the rules and guidance for the accounting [of action and support] referred to in Article 3, paragraph 14[, and Article 9, paragraph 4,] of the Agreement, for consideration and adoption by the CMA at its first session, should ensure that]:

(a) [Each Party shall] [Parties] ensure methodological consistency [between the communication of nationally determined mitigation [contributions][commitments][other] and the implementation thereof][throughout each implementation term and when tracking progress towards the achievement thereof];

(b) [Each Party shall] [Parties] include an explanation for the exclusion [its/their] nationally determined mitigation [contribution][commitment][other] of any key categories of emissions or removals and strive to include them over time;

(c) Parties shall, once a source, sink or activity is accounted for in a nationally determined mitigation [contribution][commitment][other], continue to include it or provide an explanation of why it has been excluded [and an assessment of the impact that such exclusion has on its fulfillment of the nationally determined mitigation [contribution][commitment][other]];

(d) [Each Party shall:

(i) To the extent that they use its baselines, maintain them unchanged during implementation, except for technical corrections;

(ii) To the extent that they use its projected baselines, reflect the emissions and removals that would be expected without additional action];

(e) Parties use common metrics and methodologies adopted by the Intergovernmental Panel on Climate Change for the estimation of greenhouse gas emissions and removals;

(f) [Each Party shall account for both anthropogenic emissions and removals and may exclude non-anthropogenic and legacy effects;] *[move (a)-(d) to Agreement]*

(g) [Internationally transferred mitigation outcomes used by any Party to meet its nationally determined mitigation [contribution][commitment][other] [will avoid double counting and] are supplemental to domestic action;]]

(h) [The use of internationally transferred mitigation outcomes is on the basis of an equivalent adjustment by both the transferring Party and the acquiring Party;]

(i) [The use of realistic and meaningful reference values, based on historical and actual data or projections consistent with long-term trends in historical emissions, builds, where appropriate, on approaches

established under the Convention and its instruments; in case of any change to reference values, Parties shall provide an explanation of the change;]]

{Methods and guidance}

29. *[Decides that each Party may, prior to the elaboration of guidance further to paragraph 3.10, [use][draw from][build on] methodological guidance adopted by the COP/CMP, related to [land use] and REDD-plus.]*

30. [*Also decides* that the APA shall develop, for consideration and adoption by the CMA at its first session, principles and guidelines for all actions in the land sector that:

    (a) Ensure the integrity and resilience of natural ecosystems;

    (b) Respect customary and sustainable land-use systems and the security of indigenous peoples' and local communities' land tenure;

    (c) Are undertaken in an equitable, transparent and participatory manner;

    (d) Ensure food security;

    (e) Are consistent with all relevant international obligations;]

31. [*Decides* that Parties shall, when pursuing all mitigation actions, ensure that they are consistent with all relevant obligations, ensure the integrity and resilience of natural ecosystems and respect customary and sustainable land-use systems;]

{Long-term strategies}

32. *[Decides that Parties should formulate and communicate longer-term low-emission development strategies and requests the secretariat to make Parties' communicated low-emission development strategies publicly available.]*

{Response measures}

33. **[***[Decides* to establish a cooperative mechanism by the COP at its [X] session to address the specific needs and concerns of developing country Parties[, including those Parties whose special circumstances are recognized by the COP], arising from the impacts of the implementation of response measures, by building on the work of the forum to develop a specific work programme to be undertaken by the mechanism that shall be implemented, with a view to recommending specific tools, actions and programmes to address the impacts and the implementation gaps in order to avoid and minimize adverse effects on developing country Parties[, including those Parties whose special circumstances are recognized by the COP].[Unilateral measures shall not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade].[Parties strengthen existing arrangements by establishing a cooperative mechanism (platform) under the Convention to manage the transition to low greenhouse gas emission pathways, which would identify and then measure the impacts and which would use existing tools as much as possible and further develop tools to address identified gaps and ensure their operationalization. The governing body shall develop and adopt modalities for a permanent forum under the SBSTA]].

{REIOS}

34. *Decides*, in relation to Parties, including regional economic integration organizations, implementing their ### jointly under Article 3, paragraph 18, of the Agreement, that:

    (a) Parties, including regional economic integration organizations, that have reached an agreement to implement their ### jointly shall notify the secretariat of the terms of such an agreement on the date of the deposit of their instruments of ratification, acceptance or approval of the Agreement, or accession thereto;

    (b) The secretariat shall inform Parties to the Agreement [and Parties to the Convention] of the terms of the agreement to implement jointly referred to in paragraph 34(a) above;

    (c) Any alteration to the composition of the Parties, including regional economic integration organizations, implementing jointly shall not affect any then current ### and shall become applicable for the purpose of the Agreement to the next ### submitted by that organization, by Parties implementing jointly with Parties that have become members of that organization, or by Parties implementing jointly;

{Cooperative approaches}

35. *[(paired with option 1, Article 3.19 (cooperative approaches)):* Requests the [APA] to develop and recommend the guidance referred to under Article 3, paragraph 16, of the Agreement for adoption by the CMA at its first session.]

{Mechanism to support sustainable development}

{Proposed Mechanism 1}

36. [The CMA shall adopt modalities and procedures for the above mentioned mechanism at its first session on the basis of:

(a) Voluntary participation approved by each Party involved;

(b) Real, measurable, and long term benefits related to the mitigation of climate change;

(c) Reductions in emissions that are additional to any that would occur in the absence of the certified activity;

(d) Certification of mitigation outcomes resulting from each mitigation activity by designated operational entities;

(e) Multiple windows for participation;

(f) Eligibility rules for participation that promote fair and equitable access for all Parties;

(g) Experience gained with existing mechanisms and approaches adopted under the Convention and its related legal instruments;

36bis. *Requests* the APA to recommend modalities and procedures for the mechanism to support sustainable development established under Article [3 ter] for adoption by the CMA at its first session.]

{Proposed Mechanism 2}

37. [*Requests* the CMA to recommend modalities and procedures for the mechanism to support sustainable development under [Article 3ter] for adoption by the CMA at its first session.]

ADAPTATION

38. *Requests* the [SBSTA][AC and the LEG] to develop methodologies and approaches to recognize the adaptation efforts of developing countries to respond to climate change, as referred to in Article 4, paragraph 3(b), of the Agreement, and make recommendations for adoption by the CMA at its [X] session.

39. *[Decides* that the activities referred to in Article 4, paragraph 9, of the Agreement should:

(a) Not be prescriptive or result in the duplication of efforts;

(b) Facilitate country-owned and country-driven action;

(c) Involve and facilitate the participation of relevant stakeholders, in particular women[, local communities] and indigenous peoples, in planning, decision-making and monitoring and evaluation, and give priority to the poorest and most vulnerable communities and people;

(d) Be participatory and inclusive, building on existing community-driven and traditional adaptation efforts[, in all interested developing countries, in particular in the least developed countries (LDCs), small island developing States (SIDS) and countries in Africa][, recognizing the urgent and immediate needs and special circumstances of developing country Parties, especially those that are particularly vulnerable];

(e) Promote climate resilience and sustainable development trajectories;

(f) [Facilitate access to, while not being a prerequisite for, financial, technological and capacity-building support for adaptation action;]]

40. *Requests* the [SBSTA][AC and the LEG] to prepare recommendations on the communication [or communications on actions, undertakings and/or efforts on adaptation] referred to in Article 4, paragraphs 10 and 11 of the Agreement, for the consideration of the CMA at its first session.

41. *Also requests* the [SBSTA][AC and the LEG] to develop jointly modalities and procedures for the operation of the registry referred to in Article 4, paragraph 12, of the Agreement, with a view to making recommendations to the CMA at its first session.

42. **Option 1:** *Further requests* the secretariat to make available an interim registry in 2016 for the recording of adaptation communication [or communications on actions, undertakings and/or efforts on adaptation] referred to in Article 4, paragraph 10 of the Agreement, pending the adoption by the CMA of the modalities and procedures referred to in paragraph 41 above;

Option 2: [*Further requests* the [AC][LEG][SBSTA][SBI] to [record][compile] the priorities and needs communicated by Parties as established in Article 4, paragraph 10, of the Agreement, with a view to the APA making a recommendation to the [CMA][CMP] at its [first][X] session;]

43. *Requests*, as referred to in Article 4, paragraph 15, of the Agreement, the [SBI and the SBSTA][CMA] to review the work of the adaptation-related institutional arrangements under the Convention in 2017, in order to ensure and enhance the coherence of their work, and to prepare recommendations for consideration at COP 23, and to identify improvements in the articulation of these arrangements in order to respond effectively to the needs of Parties, for consideration by the CMA at its [X] session.

44. *Also requests* the Adaptation Committee to:

(a) Establish and maintain stronger linkages with the GCF, [taking into account the balanced 50:50 approach of the allocation of financing between mitigation and adaptation,] the AF and other funds;

(b) Evaluate information on finance, technology and capacity-building support for adaptation;

(c) Provide recommendations on existing methodologies for adaptation;

(d) Take any other appropriate actions to enhance and support adaptation efforts via finance, technology transfer and capacity-building;

(e) Identify, as outlined in Article 4, paragraph 3(c), of the Agreement, the implications of the aggregate mitigation effort for projected regional impacts on the basis of the best available science, with the aim of assisting developing countries particularly vulnerable to the adverse effects of climate change[, including the LDCs, SIDS and Africa,] with:

(i) National adaptation planning;

(ii) The identification of gaps in capacity and knowledge in the light of projected impacts;

(iii) The development of strategies to address projected impacts.

45. *Establishes* a technical and knowledge platform under the Nairobi work programme on impacts, vulnerability and adaptation to climate change in order:

(a) To facilitate the dissemination and enhancement of climate change scenarios as well as methods and tools for assessing impacts and vulnerability, as well as information on adaptation benefits, practices and outcomes[, in line with Articles 4, paragraphs 1(g) and 5, of the Convention];

(b) To develop and strengthen global, regional, national and local capacities, as well as social capacities, to address adaptation concerns [and to use adaptation metrics];

(c) To promote, coordinate and strengthen adaptation knowledge platforms, centres and networks at all levels so as to fill adaptation knowledge gaps;

(d) To incorporate the sustainable management of ecosystems in adaptation planning and actions;

(e) To enhance understanding of the global and regional implications of adaptation actions, of interlinkages among local, national, regional and global adaptation actions, and of progress made in reducing vulnerability at all levels and in achieving the goals referred to in Article 2, paragraph 2, and Article 4, paragraph 1, of the Agreement;

46. *Requests* the Adaptation Committee to operationalize the technical and knowledge platform referred to in paragraph 45 above;

47. *[Decides* that the AC shall report annually to the CMA on priority areas of concern for regions;]

48. *Invites* all relevant United Nations agencies and international, regional and national financial institutions to provide information to Parties through the secretariat on how their [development assistance][climate finance] programmes [and finance] incorporate climate-proofing and climate resilience measures;

49. *Requests* Parties to strengthen regional cooperation on adaptation where appropriate and, where necessary, establish regional centres and networks, in particular in developing countries[, with support from developed country Parties as previously agreed to in decision 1/CP.16, paragraph 13].

50. [*Requests* the [SBI][SCF][AC and the LEG] to develop modalities and procedures to assist developing countries to assess their adaptation needs without placing an undue burden on them, through existing mechanisms under the Convention, and make recommendations for consideration and adoption by the CMA at its [X] session.]

51. [*Requests* the operating entities of the Financial Mechanism and developed country Parties to provide financial support for undertaking the adaptation needs assessment referred to in paragraph 50 above.]

52. [*Requests* the [SBI][SCF][AC and the LEG] to develop methodologies, and make recommendations for consideration and adoption by the COP at its [X] session, for:

    (a) Taking the steps necessary to ensure that the level of support meets the needs for adaptation in developing countries in the context of the limit to global average temperature increase referred to in Article 2 of the Agreement;

    (b) Assessing the adequacy of support referred to in Article 4, paragraph 7(d), of the Agreement.]

53. [*Requests* the GCF to establish programmes for expedited support for the LDCs for the formulation of NAPs as defined in decisions 1/CP.16 and 5/CP.17, and the subsequent implementation of policies, projects and programmes identified by them.]

LOSS AND DAMAGE

54. *Invites* all Parties to reduce the risk of, and address, loss and damage associated with the adverse effects of climate change;

55. *Encourages* Parties to strengthen and, where appropriate, develop early warning systems and risk management plans for both extreme events and slow onset events;

56. *Agrees* to further develop and elaborate the work of the Warsaw International Mechanism, pursuant to relevant decisions of the COP, including the development of modalities and procedures for the mechanism's operation and support. This can involve, as appropriate, existing bodies and expert groups under the Convention, as well as relevant organizations and expert bodies outside the Convention, and be informed by relevant precedents in international law;

57. *Requests* the Executive Committee of the Warsaw International Mechanism to develop interim modalities and procedures, for review and adoption by the CMA at its [X] session, for the operation of the climate change displacement coordination facility referred to in Article 5, paragraph 3, of the Agreement, which shall:

    (a) Assist in developing arrangements for emergency relief;

    (b) Assist in providing organized migration and planned relocation;

58. *Also requests* the Executive Committee of the Warsaw International Mechanism to develop guidelines for a comprehensive approach to climate risk management;

59. *Decides* to:

    (a) Establish a clearing house for risk transfer in order to:

        (i) Provide a repository for information on insurance and risk transfer;

        (ii) Assist Parties in developing and implementing risk management strategies and finding the best insurance schemes;

        [(iii) Facilitate financial support for rehabilitation;]

    [(b) Establish a financial technical panel to explore approaches for:

        (i) Establishing regional and subregional pools to support regional and subregional risk transfer schemes;

        (ii) Providing support for microfinance initiatives;

        (iii) Exploring finance for slow onset events;]

60. *Requests* the Executive Committee of the Warsaw International Mechanism to initiate, at its next meeting, its work related to the operationalization of the provisions contained in paragraph 59 above, and to report on progress thereon to the CMA at its [X] session;

FINANCE

61. [*Recognizes* the importance of providing grant-based and highly concessional finance for adaptation to the poorest, most vulnerable developing countries;]

62. [*Decides* that, in the implementation of the Agreement, financial resources provided by developed country Parties and other Parties included in Annex II to the Convention to developing countries should enhance the implementation of their policies, strategies, regulations and action plans and their climate change actions with respect to both mitigation and adaptation to contribute to the achievement of the [objective][purpose] of the Agreement, meeting costs of adaptation, addressing loss and damage and including access to and transfer of

environmentally-sound technologies and capacity-building, based on the principles and in accordance with the provisions of the Convention;]

63. *[Decides* that the significant share of new multilateral funding for climate change actions should flow through the Financial Mechanism and the funds established under the Convention and its Kyoto Protocol;] *{Placement proposal: to be discussed under COP agenda item on long-term climate finance/in the Agreement}*

64. *[Decides* to establish a process for the consideration of new and [alternative][additional] sources of finance beyond existing bilateral and multilateral sources, in accordance with the terms of reference to be developed by the COP [at its twenty-second session], with a view to the COP taking a decision on this matter at its twenty-third session;]

65. *[Decides* to consider ways to enhance the effectiveness of climate finance;]

66. *[Decides* to support developing country Parties, including through the provision of financial resources, to determine and report on their financing needs and country programming priorities for the post-2020 period;]

67. *[Further decides* to establish a process to review the reports of developing countries in light of efforts to scale up financial support to developing countries in accordance with Article 11, paragraph 3(d), of the Agreement;]

68. [*Decides* that adequate, predictable and sustainable financial resources for the implementation of REDD-plus activities, including for results-based payments, shall be provided by Parties pursuing the coordination of support to, inter alia, public and private sources, including the Green Climate Fund in accordance with relevant decisions by the COP;]

69. **Option 1:**

[[*Decides* that in accordance with Article 6, paragraph 16, of the Agreement [and decision 3/CP.19][developed country] Parties [and other Parties included in Annex II to the Convention], shall communicate biennially on [the provision and mobilization of financial resources][their efforts] and include, inter alia, the following as appropriate:]

(a) [Information to increase clarity on the expected levels of climate finance mobilized from different sources;]

(b) Information on their policies, programmes and priorities;

(c) Information on actions and plans to mobilize additional finance

(d) [Information on actions to enhance enabling environments in order to mobilize and attract climate finance from a variety of sources;]

(e) Information on investment plans to implement nationally determined contributions, including financing needs to implement an enhanced level of ambition;

(f) [Information on efforts to integrate climate consideration including resilience into their international and domestic development strategies;

(g) Information on mobilization of domestic resources;

(h) Information on efforts to reduce international support for high emission and maladaptive investments]

(i) [Information on adequacy of the support provided];]

Option 2:

[*Decides* that the CMA shall facilitate the communication of the information referred to in Article 6, paragraph 16, of the Agreement, to improve transparency, consistency, comparability, completeness and accuracy, taking into account the periodic assessment by the Standing Committee on Finance;]

70. [*Also decides* to ensure that the provision of financial resources, development and transfer of technology and capacity-building for enhanced climate actions, including for loss and damage, shall be measured, reported and verified through modalities established under the Convention by the relevant subsidiary bodies of the Convention. Such modalities shall ensure that there shall be no double counting of financial resources provided and ensuring the environmental integrity of this agreement;]

71. [*Further decides* that measurement, reporting and verification of financial resources, including for meeting costs of adaptation, transfer of technology and capacity-building shall be provided in accordance with Article 4, paragraphs 3, 4 and 5, 8, and 9, in implementation of Article 4, paragraph 7 of the Convention, as well as financing provided through the Warsaw Mechanism for Loss and Damage;]

72. [*Decides* that, when accounting for financial resources provided and mobilized through public interventions, developed country Parties and other developed Parties included in Annex II to the Convention shall ensure that:

(a) Such financial resources accounted for specifically target climate adaptation, mitigation and cross-cutting activities as their main objective in line with the criteria from the IPCC;

(b) Any uncertainty is to be overcome following the principle of conservativeness, where it is preferable that financial resources are under reported rather than over reported;

(c) Where multiple actors are involved, the resulting financial resources are only counted once;

(d) Mobilized private financial resources are only reported where there is a clear causal link with a public intervention and the activity would not have moved forward, or moved forward at scale, in the absence of the public intervention;

(e) Mobilized multilateral financial resources are adjusted so that only the share attributed to developed country Parties and other developed Parties included in Annex II to the Convention is accounted for;] *{Placement proposal: to be moved* to Article 9*}*

73. [*Also decides* that the guidelines as per Article 6, paragraph 18, of the Agreement shall be developed in accordance with the provisions of the Convention and relevant decisions of the COP mutatis mutandis under the Agreement, and will be part of the common framework for transparency of action and support under Article 9 of this Agreement;]

74. [*Further decides* that the existing operating entities of the Financial Mechanism the Green Climate Fund and the Global Environment Facility shall serve this Agreement. [The Special Climate Change Fund, the Least-Developed Countries Fund and the Adaptation Fund will also serve the Agreement. Other funds may be established under this agreement.] The CMA has the authority to modify this list. [The operation of the Financial Mechanism shall remain open to be entrusted to other existing international entities.]]

75. [*Decides* that the CMA shall provide guidance on the policies, programme priorities, and eligibility criteria for the financial mechanism of this Agreement.] [The COP shall forward the guidance by the CMA to the operating entities in their entirety;]

76. [*Also decides* that a developing country Party in need of support is eligible to receive support from the operating entities of the Financial Mechanism, if it has communicated an NDMC under Article 3 of the Agreement and has submitted timely reports under Article 9 of the Agreement;]

77. *Further decides* that the Standing Committee on Finance shall serve the Agreement in line with its functions and responsibilities established under the COP;

TECHNOLOGY DEVELOPMENT AND TRANSFER

78. *[Decides* to strengthen the technology needs assessment (TNA) process, taking into account existing efforts, including under the Poznan strategic programme on technology transfer, by enhancing:

(a) The implementation of the results of the TNA process through, inter alia, technology action plans and project proposals;

(b) [The alignment of TNAs more closely with bankable finance projects and] improving TNAs to result in implementable projects;

(c) The synergy between the TNA process and other arrangements related to the implementation of mitigation and adaption actions, as appropriate;

(d) The operationalization of decision 18/CP.20 in the TNA process towards achieving gender-responsive climate policy in all relevant activities under the Convention;]*

** This paragraph will be finalized in the light of any relevant decision of COP 21 on strengthening the TNA process.*

79. *[Requests* the Technology Executive Committee (TEC) to elaborate the means of strengthening the TNA process referred to in paragraph 78 above, taking into account ongoing work relating to this matter, for consideration and adoption by the COP at its twenty-third session;]

80. *Decides* to strengthen the Technology Mechanism and requests the TEC and the Climate Technology Centre and Network (CTCN) to support the implementation of the Agreement[, including by strengthening their work relating to, inter alia, technology research, development and demonstration];

81. **Option 1:** *[Encourages]* [Parties][Developed country Parties][Parties included in Annex X to the Agreement] [to][shall][should] take steps to [improve enabling environments] [and address barriers] for technology development and transfer by:

(a) **Option (a):** Establishing and strengthening policy frameworks, institutions and the capacity to build country ownership and innovation, integrating a gender perspective and involving and strengthening the potential of citizens and communities;

Option (b): Arrangements shall be established to address intellectual property rights (IPRs), such as collaborative research and development, shareware, commitments related to humanitarian or preferential licensing, fully paid-up or joint licensing schemes, preferential rates and patent pools;

(b) [Leveraging and attracting private-sector investments and promoting access to [public-sector technology][technology in the public domain];]

(c) Strengthening the development and enhancement of endogenous capacities and technologies;

(d) In accordance with Article 4, paragraph 5, of the Convention, developed country Parties shall provide financial resources to address barriers created by IPRs and facilitate access to and the deployment of technology, including, inter alia, by utilizing the Financial Mechanism and/or establishing a funding window under the GCF to meet the full costs of IPRs of environmentally sound technologies and know-how, and such technologies will be provided to developing country Parties free of charge in order to enhance their actions to address climate change;

Option 2: [Developed country Parties][Parties included in Annex X to the Agreement] [shall][should][other] undertake steps to address barriers to accessing technology [and know-how] and to:

(a) Establish and strengthen their necessary policy frameworks in order to facilitate the removal of barriers and enable and accelerate technology development and transfer to [developing country Parties][Parties not included in Annex X to the Agreement];

(b) [Leverage enhanced support from the private sector for technology development and transfer to [developing country Parties][Parties not included in Annex X to the Agreement]] [Promote access to public-sector technology and promote technology development and transfer to developing country Parties];

(c) Provide financial and human resources and institutional and technical support for technology development and transfer to[, and for the development and enhancement of endogenous capacities and technologies of] [developing country Parties][Parties not included in Annex X to the Agreement];

82. **Option 1:** *Requests* the [APA] to develop recommendations regarding the technology framework referred to in Article 7, paragraph 3, of the Agreement, for consideration and adoption by the [CMA] at its first session, taking into account the need to avoid duplication and the opportunity to create synergies; the [APA] should consider, inter alia, the relationship between that framework and the framework for meaningful and effective actions [to enhance the implementation of Article 4, paragraph 5, of the Convention,] as well as the functions of the former and its linkage to the Technology Mechanism;

Option 2: *[Decides that* the SBI review the Technology Framework [Technology Mechanism under the framework] with a view to strengthening it, taking into consideration that the framework shall, inter alia] [Requests the [APA][SBI][SBSTA][others] to elaborate on the technology framework established under Article 7, paragraph 3, of the Agreement, taking into consideration that it shall, inter alia]:

(a) Facilitate the undertaking and updating of TNAs in developing country Parties;

(b) Facilitate various options for enabling developing countries' access to technologies;

(c) Facilitate the [undertaking of technology assessments][conducting of regular assessments [on][of] technologies that are ready for transfer];

(d) Make the list of ready-to-transfer technologies;

(e) Set the target for supporting the development and transfer of each technology to developing countries[and urging Parties to communicate to the secretariat in their INDC on the provision of the technology in a manner that facilitates clarity and understanding of the provision of support] [and anchoring dedicated nodal research, development and demonstration facility on technology development and transfer];

(f) [Mobilize resources to deliver the support] [[Facilitate] enhance financing and technical support for the implementation of the outcomes of the TNAs of developing countries];

(g) Address barriers to and create appropriate enabling environments for technology development and transfer;

Option 3: *Requests* the SBs to elaborate upon the technology framework referred to in Article 7, paragraph 3, of the Agreement.

83. *Decides* that the TEC and the CTCN shall report to the CMA, through the subsidiary bodies, on their activities to support the implementation of the Agreement;

84. *Also decides* to undertake a periodic assessment of the effectiveness of and the adequacy of the support provided to the Technology Mechanism in supporting the implementation of the Agreement on matters relating to technology development and transfer;

85. *Requests* the SBI to elaborate the scope and modalities of the periodic assessment referred to in paragraph 84 above, taking into account the review procedures of the CTCN as stipulated in annex VII to decision 2/CP.17 and the modalities for the stocktaking referred to in Article 10, paragraph 1, of the Agreement, for consideration and adoption by the COP at its [xx] session;

CAPACITY-BUILDING

Option 1: (*paragraph 86*)

86. *Requests* the SBI to act on the outcome of the third review of the Framework for capacity-building in developing countries , including ensuring appropriate institutional arrangements related to the implementation of Article [8] of the [Agreement], and to submit a proposal for consideration by the COP at its twenty-second session;

Option 2: (*paragraphs 86-94*)

86. *Decides* to launch the Paris Work Programme on Capacity-Building (PWPCB) from 2016 to 2019 [under the capacity-building committee hereby established] with the aim of addressing gaps and needs, both current and emerging, in implementing capacity-building in developing country Parties and further enhancing capacity-building efforts including coherence and coordination in capacity-building activities under the Convention by:

(a) Assessing how to increase synergies of cooperation and avoid duplication between existing bodies established under the Convention that implement capacity-building activities, including collaborating with institutions under and outside the Convention;

(b) Identifying capacity gaps and needs and recommending ways to fill these gaps, including through increased and more targeted climate finance, taking into account the results of in-depth analysis of country needs and challenges for capacity-building;

(c) Promoting the development and dissemination of tools and methodologies for the implementation of capacity-building;

(d) Fostering global, regional, national and subnational cooperation;

(e) Identifying and collecting good practices, challenges, experiences, and lessons learned in work on capacity-building by bodies established under the Convention;

(f) Exploring how developing countries can take ownership of building and maintaining capacity over time and space;

(g) Identifying opportunities to strengthen capacity at the national, regional, and subnational level;

(h) Fostering dialogue, coordination, collaboration and coherence among relevant processes and initiatives under the Convention, including through exchanging information on capacity-building activities and strategies of bodies established under the Convention;

(i) Providing guidance to the secretariat on the maintenance and further development of the web-based Capacity-Building Portal;

87. *Decides* that the [PWPCB][capacity-building committee] will annually focus on an area or theme for enhanced technical exchange on capacity-building, with the purpose of maintaining up-to-date knowledge on the successes and challenges of building capacity effectively in a particular area; [for example in 2016, capacity-building for reporting; in 2017, capacity-building for adaptation actions, etc.];

88. *Requests* the SBI to organize an annual in-session meeting of the [PWPCB][capacity-building committee] for four years, beginning in 2016;

89. *Requests* relevant bodies established under the Convention to nominate two members to participate in the meetings of the [PWPCB][capacity-building committee], as appropriate;

90. *Decides* that the [PWPCB][capacity-building committee] will commission a survey with questions addressed to operating entities, bodies established under the Convention and other relevant organizations outside the Convention to identify institutional gaps and additional linkages or alignment that can be achieved;

91. *Decides* that the inputs to the [PWPCB][capacity-building committee] will include, inter alia, submissions, the outcome of the third comprehensive review of the implementation of the Capacity-Building Framework, the secretariat's annual synthesis report on the implementation of the framework for capacity-building in developing countries, and the secretariat's compilation and synthesis report on capacity-building work of bodies established under the Convention and its Kyoto Protocol;

92. *Requests* the secretariat to submit annual technical progress reports on the work of the [PWPCB][capacity-building committee] to the SBI for its consideration at the sessions of the SBI that are held in conjunction with sessions of the COP;

93. *Decides* that the [PWPCB][capacity-building committee] will complete its work by SBI 50 (December 2019), with a view to providing recommendations to the SBI at the same session;

94. *Invites* the CMA, at its first session, to:

(a) Review the efficiency and effectiveness of the [PWPCB][capacity-building committee];

(b) Consider the recommendations of the SBI, as it seeks to enhance capacity-building activities under the Agreement;

(c) [Establish the capacity-building mechanism pursuant to Article 8, paragraph 5, of the Agreement;]

Option 1: *(paragraph 95)*

95. *Requests* the [IPC] [SBI] to prepare a recommendation for the CMA on the enhancement and intensification of the work of the institutional arrangements on capacity-building;

Option 2: *(paragraph 95)*

95. *Requests* the [IPC] [SBI] to develop modalities and procedures for the capacity-building mechanism established by Article 8, paragraph 5, of the Agreement;

Option 3: (*paragraphs 95 and 95bis*) {International Mechanism for Capacity Building under the Convention and the Agreement}

95. The International Mechanism for Capacity-Building is the institutional arrangement for capacity-building under the Convention, the Kyoto Protocol and the Agreement and constitutes the Durban Forum, the capacity-building portal and the proposed Capacity-building Coordination Committee (proposed in decision X/CP.21). The mechanism is established under the Capacity Building Frameworks (decisions 2/CP.7 and 3/CP.7) to address capacity-building needs and gaps in developing countries and countries with economies in transition as they implement the Convention, the Kyoto Protocol and the Agreement;

95bis. In fulfilling its role in a comprehensive, integrated and coherent manner, the International Mechanism for Capacity-Building shall:

(a) Enhance knowledge on and understanding of technical and management approaches to addressing capacity-building needs and gaps in developing countries and countries with economies in transition by facilitating and promoting: (a) action to address gaps in the understanding of and expertise on approaches to addressing capacity-building associated with the implementation of the Convention, its Kyoto Protocol and the Agreement; (b) the collection, sharing, management and utilization of relevant data and information; and (c) the translation into implementable actions of the synthesis of best practices, challenges, experiences and lessons learned drawn and developed by the secretariat from the Durban Forum and any data and information from the Capacity-Building Portal;

(b) Strengthen dialogue, coordination, coherence and synergies among relevant stakeholders;

(c) Provide leadership and coordination and, as and where appropriate, oversight of the assessment and implementation of approaches to addressing capacity-building needs and gaps in developing countries and countries with economies in transition associated with the implementation of the Convention, its Kyoto Protocol and the Agreement;

(d) Foster dialogue, coordination, coherence and synergies among all relevant stakeholders, institutions, bodies, processes and initiatives outside of the Convention, with a view to promoting cooperation and collaboration across relevant work and activities at the subnational, national, regional and international levels;

(e) Enhance action and support, including in relation to adaptation, mitigation, finance and technology, to address capacity-building under the Convention, the Kyoto Protocol and the Agreement;

(f) Provide information and recommendations on addressing capacity-building implementation needs and gaps in developing countries and countries with economies in transition for consideration by the Conference of the Parties when providing relevant guidance to the Financial Mechanism of the Convention and its operating entities under the Convention, its Kyoto Protocol and the Agreement;

(g) Facilitate the mobilization and securing of expertise, and the enhancement of support, including in relation to adaptation, mitigation, finance and technology, to strengthen existing approaches and, where necessary, facilitate the development and implementation of additional approaches to addressing capacity-building under the Convention, its Kyoto Protocol and the Agreement;

(h) Strengthen, consolidate and enhance the sharing of relevant information, knowledge, experience and good practices, at the local, national, regional and international levels, taking into account, as appropriate, traditional knowledge and practices and gender-disaggregated data and information;

(i) Complement, draw upon the work of and involve, as appropriate, existing bodies and expert groups under the Convention, the Kyoto Protocol and the Agreement, as well as relevant organizations and expert bodies outside of the Convention, at the subnational, national and international levels;

(j) Promote synergies and strengthen engagement with subnational, national, regional and international organizations, centres and networks in order to enhance the implementation of capacity-building actions on mitigation, adaptation, technology and finance in developing countries and countries with economies in transition;

(k) Consider data and information communicated by countries and other partners on the monitoring and review of capacity-building at the subnational, national, regional and international levels in relation to mitigation, adaptation, technology transfer, support provided and received, possible needs and gaps and other relevant information;

(l) Assess and provide recommendations on further actions that may be required to lift constraints on and fill gaps in capacity-building at the subnational, national, regional and international levels, particularly in developing countries and countries with economies in transition.]

96. *Calls upon* all Parties to ensure that education, training and public awareness, as reflected in Article 6 of the Convention and in Article 8bis of the Agreement are adequately considered in their contribution to capacity building;

97. *Requests* the CMA to explore ways of enhancing the implementation of training, public awareness, public participation and public access to information so as to enhance actions under this Agreement, at its first session;

TRANSPARENCY OF ACTION AND SUPPORT

98. *Decides* to establish the Capacity-building Initiative for Transparency in order to build institutional and technical capacity, both pre- and post-2020. This initiative will support developing country Parties, upon request, in meeting [enhanced] transparency requirements as defined in Article 9[, paragraph 6,] of the Agreement in a timely manner.

99. *Also decides* that this initiative will aim:

(a) To strengthen national institutions for transparency-related activities in line with national priorities;

(b) To provide relevant tools, training and assistance for meeting the provisions stipulated in Article 9 of the Agreement;

(c) To assist in the improvement of transparency over time.

100. *Requests* the operating entities of the Financial Mechanism to support the establishment and operation of the Initiative. In particular, urges and requests the Global Environment Facility to make arrangements to support the establishment and operation of this Initiative as a priority reporting-related need, including through voluntary contributions to support developing countries in GEF-6 and future replenishment cycles, to complement existing support under the GEF.

101. *Also requests* the [APA][SBSTA] to develop recommendations for modalities, procedures and guidelines in accordance with Article 9, paragraph 8, of the Agreement, and to define the year of their first and subsequent review and update, as appropriate, at regular intervals, for consideration and adoption at the first session of the CMA/by the twenty-fourth session of the COP, taking into account, inter alia:

(a) The importance of facilitating improved reporting and transparency over time;

(b) The need to avoid undue burden and duplication;

(c) The need to ensure that there is no backsliding;

(d) The need to ensure that there is no double counting;

(e) The need to ensure environmental integrity.

102. *Further requests* the [APA][SBSTA], when developing modalities, procedures and guidelines in accordance with paragraph 101 above, to consider, inter alia:

(a) The application of technical corrections in the review of greenhouse gas inventories provided in accordance with Article 9, paragraph 4(a), of the Agreement;

(b) The types of flexibility to developing countries set out in Article 9, paragraph 2, of the Agreement including scope, frequency of reporting, level of detail, and the application of a grace period;

(c) The methodological consistency between the communication of nationally determined mitigation {insert the relevant phrase from outcome of Article 3.2} and their implementation;

(d) Explanations of key categories of emissions and removals excluded from nationally determined mitigation {insert the relevant phrase from outcome of Article 3.2} and strive to include them over time;

(e) That Parties, once a source, sink or activity is accounted for in a nationally determined mitigation {insert the relevant phrase from outcome of Article 3.2}, continue to include it or provide an explanation of why it has been excluded;

(f) That Parties use common metrics and methodologies adopted by the Intergovernmental Panel on Climate Change for the estimation of greenhouse gas emissions and removals;

(g) That internationally transferred mitigation outcomes used by any Party to meet its nationally determined mitigation {insert the relevant phrase from outcome of Article 3.2} are supplemental to domestic action;

(h) That Parties report on progress made in the implementation of their national adaptation plans to the secretariat every two years and collectively exchange information and share lessons learned in the implementation of adaptation, including at the SBSTA, and by promoting, coordinating and strengthening adaptation knowledge platforms, centres and networks;

(i) That Parties improve the methodologies used for reporting information on their adaptation undertakings, their assessment of climate change impacts, their quantification of and information on vulnerability, and their quantification of impacts, actions taken to build resilience and reduce vulnerability, and investments required, and for contributing information to the global stocktake, as set out in Article 10 of the Agreement;

(j) Support provided, enhancing delivery of support for both adaptation and mitigation through, inter alia, the common tabular formats for reporting support, and taking into account the SBSTA agenda item on methodologies for reporting on finance, domestic measurement and international verification, and enhancing the reporting by developing countries on support received, including the use, impact and estimated results thereof;

(k) Enhanced domestic monitoring, reporting and verification systems for action and support;

(l) Developing an international system of accounting designed to avoid double or multiple counting of support across countries and donors;

(m) Information to enable the tracking of progress against the aggregate goal for finance, set out in Article 6, paragraph 10, of the Agreement, the global stocktake set out in Article 10 of the Agreement, and the broader transformation of financial flows;

(n) Drawing on the biennial assessments and other reports by the SCF and other relevant bodies under the Convention;

(o) Enhancing the clarity and tracking of progress on the financial resources provided and mobilized by developed country Parties and other developed Parties included in Annex II to the Convention, both at the individual and collective levels;

(p) Enhanced reporting on the negative social and economic impact of response measures.

{This section requires adjustments to align with outcomes from other relevant Articles}

103. *Decides* to continue and to further strengthen the mandate of multilateral assessment for the provision of financial resources, technology development and transfer, and capacity-building to developing countries Parties during the international assessment and review process for those Parties, in order to ensure that commitments and the provision of such support by developed country Parties and other developed Parties included in Annex II to the Convention are implemented, verified through a robust verification system and meet the needs expressed and identified by developing country Parties, recalling the mandate contained in decision 2/CP.17, paragraph 26, on revising the modalities and procedures for international assessment and review no later than 2016;

104. *Also decides* that developed country Parties and other developed Parties included in Annex II to the Convention shall report on the provision of financial resources, technology development and transfer, and capacity-building to developing countries, in line with the common methodologies adopted by the COP as mandated by decision 2/CP.17, paragraph 19;

105. *Requests* that the progress of work under the work programme referred to in paragraph 9 above be reported to future sessions of the Conference of the Parties and that this work be concluded no later than 2018;

106. *Decides* that Parties' first biennial communications shall be submitted in 2022;

107. *Also decides* that the review of reporting shall commence three months after the submission of the biennial communications;

108. *Further decides* that the measurement, reporting and verification system established by decisions 1/CP.16 and 2/CP.17 shall be superseded by the common system of transparency of action and support, immediately following the submission of the final biennial reports and biennial update reports.

GLOBAL STOCKTAKE

109. **Option 1:** *Decides* that a comprehensive assessment resulting from the global stocktake referred to in Article 10 of the Agreement shall take into account, inter alia:

(a) An updated aggregate synthesis report on the [overall] [collective] effect of the nationally determined contributions communicated by Parties;

(b) [The [overall] [collective] effect of the nationally determined contributions communicated by Parties for subsequent commitment periods;]

(c) The state of adaptation efforts, experiences and priorities, including information from national adaptation plans;

(d) The mobilization and provision of means of implementation and support;

(e) The latest reports of the IPCC;

(f) [The [overall] [collective] effect of NDC as informed by the aggregated output of the collective monitoring, reporting and verification process under Article 9 of the Agreement, including from national communications and biennial assessment of the SCF];

(g) Relevant inputs from [the 2013–2015 review and] the technical examination process as referred to in decision 1/CP.20, paragraph 19 [of opportunities to enhance practical action];

(h) Relevant existing mechanisms of the Convention;

(i) Input from relevant international organizations, non-state actors and international cooperative initiatives;

(j) Other inputs identified by the CMA.

Option 2: *Requests* the [body] to identify the sources of input for the global stocktake referred to in Article 10 of the Agreement and to report to the CMA, for consideration and adoption at its first session;

110. *Requests* the SBSTA to provide advice on how the assessments of the Intergovernmental Panel on Climate Change can inform the stocktaking of the implementation of the Agreement pursuant to its Article 10 and to report to the [body] on this matter at its first session;

111. *Requests* the [body] to develop modalities for the global stocktake referred to in Article 10 of the Agreement and to report to the CMA, for consideration and adoption at its first session;

FACILITATING IMPLEMENTATION AND COMPLIANCE

[112. *Requests* the [APO] to develop the modalities and procedures for the effective operation of the [mechanism][committee][International Climate Justice Tribunal] referred to in Article 11 of the Agreement, with a view to the APO completing its work on this matter for consideration and adoption by the CMA at its first session. [These modalities and procedures shall, inter alia, set out the structure of the [mechanism][committee] and the range of actions to be taken by the [mechanism][committee] to carry out its functions[, taking into account the transparency framework referred to in Article 9 of the Agreement].]]

IV. [WORKSTREAM 2]

[[A. Preamble]

The Conference of the Parties,

Pp1 *Recalling* Articles 2, 3 and 4 of the Convention,

Pp2 *Also recalling* decisions, 1/CP.17, 2/CP.18, 1/CP.19 and 1/CP.20,

Pp3 *Emphasizing* with serious concern the urgent need to address the significant gap between the aggregate effect of Parties' mitigation pledges global annual emissions of greenhouse gases by 2020 [and aggregate emission pathways] consistent with having a likely chance of keeping the increase in global average temperature below 2 °C [or 1.5 °C] above pre-industrial levels,

Pp4 *Stressing* the urgency of accelerating the implementation of the Convention and its Kyoto Protocol in order to enhance pre-2020 ambition,

Pp5 *Recognizing* the urgent need to enhance the provision of finance, technology and capacity-building support by developed country Parties, in a predictable manner, to enable enhanced pre-2020 action by developing country Parties,

Pp6 *Emphasizing* that enhanced pre-2020 ambition can lay a solid foundation for enhanced post-2020 ambition,

Pp7 *Also emphasizing* the enduring benefits of ambitious and early action, including major reductions in the cost of future mitigation and adaptation efforts,

Pp8 *Agreeing* to uphold and promote regional and international cooperation in order to mobilize stronger and more ambitious climate action by all Parties and non-Party stakeholders, including civil society, the private sector, financial institutions, cities and other subnational authorities, local communities and indigenous peoples,

[B. Mitigation]

113. *Resolves* to ensure the highest possible mitigation efforts in the pre-2020 period, including by:

(a) Urging all Parties to the Kyoto Protocol that have not already done so to ratify and implement the Doha Amendment to the Kyoto Protocol;

(b) Urging all Parties that have not already done so to make and implement a mitigation pledge under the Cancun Agreements;

(c) Reiterating its resolve, as set out in decision 1/CP.19, paragraphs 3 and 4, to accelerate the full implementation of the decisions constituting the agreed outcome pursuant to decision 1/CP.13 and enhance ambition in the pre-2020 period in order to ensure the highest possible mitigation efforts by all Parties under the Convention;

(d) Inviting developing country Parties that have not submitted their first biennial update reports to do so as soon as possible;

(e) Urging all Parties to participate in the existing measurement, reporting and verification processes under the Cancun Agreements, in a timely manner, with a view to demonstrating progress made in the implementation of their mitigation actions, and urging those Parties with pledges under the Cancun Agreements to do so with a view to demonstrating the full implementation of their pledges;

114. *Encourages* Parties to promote to Party and non-Party stakeholders the voluntary cancellation, without double counting, of units, including certified emission reductions issued under the Kyoto Protocol that are valid for the second commitment period;

115. [*Urges* host and purchasing Parties to report transparently on internationally transferred mitigation outcomes, including those outcomes used to meet international pledges, and emission units issued under the Kyoto Protocol with a view to promoting environmental integrity and avoiding double counting;]

116. *Recognizes* the social, economic and environmental value of voluntary mitigation actions and their co-benefits for adaptation, health and sustainable development;

117. *Resolves* to strengthen, in the period 2016–2020, the existing technical examination process on mitigation as defined in decision 1/CP.19, paragraph 5(a) and decision 1/CP.20, paragraph 19, taking into account the latest scientific knowledge, including by:

(a) Encouraging Parties, Convention bodies, international organizations and non-Party stakeholders to engage in this process, to share their experiences and suggestions, including from regional events, and to cooperate in facilitating the implementation of policies, practices and actions identified during this process in accordance with national sustainable development priorities;

(b) Striving to improve, in consultation with Parties, access to, and participation in, this process of developing country Party and non-Party experts;

(c) Requesting the Technology Executive Committee and the Climate Technology Centre and Network in accordance with their respective mandates:

(i) To engage in the technical expert meetings and enhance their efforts to facilitate and support Parties in scaling up the implementation of policies, practices and actions identified during this process;

(ii) To provide regular updates during the technical expert meetings on the progress made in facilitating the implementation of policies, practices and actions previously identified during this process;

(iii) To include information on their activities under this paragraph in their joint annual report to the Conference of the Parties;

(d) Encouraging Parties to make effective use of the Climate Technology Centre and Network to obtain assistance to develop economically, environmentally and socially viable project proposals in the high mitigation potential areas identified in this process;

118. *Encourages* the operating entities of the Financial Mechanism of the Convention to engage in the technical expert meetings and to inform participants on their contribution in facilitating progress in the implementation of policies, practices and actions identified during the technical examination process;

119. *Requests* the secretariat to organize the process referred to in paragraph 117 above and disseminate its results, including by:

(a) Organizing, in consultation with the Technology Executive Committee and relevant expert organizations, regular technical expert meetings focusing on specific policies, practices and actions representing best practice and with the potential to be scalable and replicable;

(b) Updating, on an annual basis, following the meetings referred to in paragraph 119(a) above and in time to serve as input to the summary for policymakers referred to in paragraph 119(c) below, a technical paper on the mitigation benefits and co-benefits of policies, practices and actions to enhance mitigation ambition, as well as on options to support the implementation of these, information on which should be made available in a user-friendly online format;

(c) Preparing, in consultation with the champions referred to in paragraph 130 below, a summary for policymakers, with information on specific policies, practices and actions representing best practice and with the potential to be scalable and replicable, and on options to support the implementation of these, as well as on relevant collaborative initiatives, and publishing the summary at least two months in advance of each session of the Conference of the Parties as input for the high-level event referred to in paragraph 129 below;

120. *Decides* that the process referred to in paragraph 117 above should be organized jointly by the Subsidiary Body for Implementation and the Subsidiary Body for Scientific and Technological Advice and take place on an ongoing basis until 2020;

121. *Also decides* to conduct, in 2017, an assessment of the process referred to in paragraph 117 above, so as to improve its effectiveness;

[C. Support]

122. *Resolves* to enhance the provision of urgent and adequate finance, technology and capacity-building by developed country Parties in order to enhance the level of ambition of pre-2020 action by Parties, and in this regard *strongly urges* developed country Parties to scale up their level of financial support, with a concrete roadmap to achieve the goal of jointly providing USD 100 billion annually by 2020 for mitigation and adaptation, and significantly increasing adaptation finance from current levels and to further provide appropriate transfer of technology and capacity-building;

122Alt. *Reiterates* its resolve as set out in decision 1/CP.19, paragraphs 2, 3 and 4(e), and in decision 1/CP.20, paragraph 18, to accelerate the full implementation of the decisions constituting the agreed outcome pursuant to decision 1/CP.13, in particular in relation to the provision of means of implementation including technology, finance and capacity-building to developing country Parties, recognizing that such implementation will enhance ambition in the pre-2020 period;

[D. Accelerated implementation]

[Option 1: *(paragraph 123-123ter)*

123. *Decides* to launch an accelerated implementation process starting in 2016 and continuing until 2020, to give effect to decision 1/CP.19, paragraphs 3 and 4, inter alia, by:

(a) Assessing the progress of the implementation of decision 1/CP.19, paragraph 4;

(b) [Reviewing and] assessing the adequacy of financial, technological and capacity-building support to enable increased mitigation and adaptation ambition by developing country Parties in accordance with decision 1/CP.19, paragraphs 3, 4(e) and 4(f);

(c) Developing and implementing measures to identify and address the adaptation and means of implementation gaps in the pre-2020 period;

(d) Developing ways and means to address the implementation gaps identified in the paragraph 123(c) above in accordance with the principles and provisions of the Convention;

(e) Sharing experiences, assessing the adequacy and addressing economic diversification as well as the adverse social and economic impacts of response measures on developing country Parties;

123bis. *Requests* the secretariat to organize the process referred to in paragraph 123 above and disseminate its results;

123ter. *Decides* that the process referred to in paragraph 123 above should be conducted under the Subsidiary Body for Implementation and take place annually until 2020;

Option 2: *(paragraph 123)*

123. *Decides* to conduct a facilitative dialogue in conjunction with the twenty-third session of the Conference of the Parties (November 2017) with a view to identifying ways to enhance the ambition of mitigation efforts by all Parties, including identifying relevant opportunities to enhance the provision and mobilization of support and enabling environments;]

[E. Non-Party stakeholder engagement]

124. *Acknowledges* with appreciation the results of the Lima-Paris Action Agenda, which build on the climate summit convened on 23 September 2014 by the United Nations Secretary-General;

125. *Welcomes* the efforts of non-Party stakeholders to scale up their climate actions, including those registered in the Non-State Actor Zone for Climate Action (NAZCA) platform;

126. *Invites* non-Party stakeholders to demonstrate their climate actions through mechanisms such as the NAZCA platform;

127. *Encourages* Parties to work closely with non-Party stakeholders to catalyse efforts to strengthen mitigation and adaptation action;

128. *Also encourages* non-Party stakeholders to increase their engagement in the processes referred to in paragraphs 117 above and 131 below;

[F. High-level dialogue/events]

129. *Agrees* to convene, in furtherance of decision 1/CP.20 paragraph 21, building on the Lima-Paris Action Agenda and in conjunction with each session of the Conference of the Parties from 2016 to 2020, a high-level event that:

(a) Further strengthens high-level engagement on the implementation of policy options and actions arising from the processes referred to in paragraph 117 above, building on the summary for policymakers referred to in paragraph 119(c) above;

(b) Provides an opportunity for announcing new or strengthened efforts, voluntary initiatives and coalitions, including implementation of policies, practices and actions arising from the processes referred to in paragraph 117 above and presented in the summary for policymakers referred to in paragraph 119(c) above;

(c) Takes stock of related progress and recognizes new or strengthened efforts, voluntary initiatives and coalitions;

(d) Facilitates the exchange of experiences and sharing of best practices on climate action by non-Party stakeholders, including by providing a platform to strengthen indigenous peoples' knowledge, practices and technologies on mitigation and adaptation in a holistic and integrated manner;

(e) Provides meaningful and regular opportunities for the effective engagement of high-level dignitaries from Parties, international organizations, international cooperative initiatives and non-Party stakeholders;

130. *Decides* that two high-level champions shall be appointed to facilitate, through strengthened high-level engagement in the 2016–2020 period, the successful execution of existing efforts and the scaling-up and launching of new or strengthened efforts, voluntary initiatives and coalitions, including by:

(a) Working with the Executive Secretary and the current and incoming presidents of the Conference of the Parties to coordinate the annual high-level event referred to in paragraph 129 above;

(b) Engaging with interested Parties and non-Party stakeholders, including to further the voluntary initiatives of the Lima-Paris Action Agenda;

(c) Providing guidance to the secretariat on the organization of technical expert meetings referred to in paragraph 119(a) above;

131. *Also decides* that the high-level champions referred to in paragraph 130 above should serve for a term of two years, with their terms overlapping for a full year to ensure continuity, such that:

(a) The President of the twenty-first session of the Conference of the Parties should appoint one champion, who should serve from the date of the appointment until the last day of the twenty-second session of the Conference of the Parties (November 2016);

(b) The President of the twenty-second session of the Conference of the Parties should appoint one champion, who should serve from the date of the appointment until the last day of the twenty-third session of the Conference of the Parties;

(c) Thereafter, each subsequent President should appoint one champion who should serve for two years and succeed the previously appointed champion whose two-year term has ended;

132. *Invites* all interested Parties and relevant organizations to provide support for the work of the champions referred to in paragraph 130 above;

[G. Adaptation]

133. *Decides* to launch an [enhanced] technical examination [process] of adaptation action [under the Subsidiary Body for Implementation and the Adaptation Committee, in collaboration with the SBSTA], and in consultation with relevant bodies, including, inter alia, the Least Developed Countries Expert Group, the Standing Committee on Finance, the Consultative Group of Experts on National Communications from Parties not included in Annex

I to the Convention, the Climate Technology Centre and Network and the Technology Executive Committee, and with consideration of activities under the Nairobi work programme;

134. *Also decides* that such [enhanced] technical examination [process] of adaptation action will endeavour to identify opportunities for strengthening resilience, reducing vulnerabilities and increasing the understanding and implementation of adaptation actions;

135. *Further decides* to launch an [enhanced] technical examination [process] of adaptation action [under the Subsidiary Body for Implementation and the Adaptation Committee, in collaboration with the SBSTA], and in consultation with relevant bodies, including, inter alia, the Least Developed Countries Expert Group, the Standing Committee on Finance, the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention, the Climate Technology Centre and Network and the Technology Executive Committee, and with consideration of activities under the Nairobi work programme;

136. *Decides* that [the SBI and the Adaptation Committee, in collaboration with the SBSTA], and with the support of the secretariat, will engage with and explore ways to take into account, synergize with and build on the existing arrangements for adaptation-related work programmes, bodies and institutions under the Convention, ensuring that value is added to existing activities and avoiding any duplication of work;

137. *Also decides* that such [enhanced] technical examination [process] of adaptation action will be pursued trough:

(a) Facilitating the sharing of good practices, experiences and lessons learned;

(b) Identifying actions that could significantly enhance the implementation of adaptation action including those actions which could enhance economic diversification and have mitigation co-benefits;

(c) Examining gaps relating to institutions, knowledge, technology development and transfer, capacity and finance;

(d) Promoting cooperative action on adaptation;

(e) Developing modalities and procedures to assist developing countries to assess their adaptation needs without placing an undue burden on them, taking into account the urgent needs of those developing countries that are particularly vulnerable;

(f) Identifying options to strengthen enabling environments and enhance the provision of support for adaptation, including finance, technology development and transfer and capacity-building;

138. *Further decides* that the [enhanced] technical examination [process] of adaptation action will take into account the process, modalities, outputs and outcomes, as well as the lessons learned from the technical examination process on mitigation referred to in paragraph 117 above;

139. *Requests* [the secretariat] to facilitate the [enhanced] technical examination [process] of adaptation action by:

(a) Organizing regular technical expert meetings focusing on policies, strategies and actions;

(b) Preparing a yearly synthesis report on the progress of the enhanced technical examination of adaptation action;

(c) Preparing regularly and in time to serve as input to the summary for policymakers referred to in paragraph 139(d) below, a technical paper on opportunities to enhance adaptation action [and support, including gaps in means of implementation];

(d) Preparing a summary for policymakers and publishing it well in advance of [each] session of the Conference of the Parties;

140. *Invites* the President of the Conference of the Parties to convene, in conjunction with each session of the Conference of the Parties, a high-level event aimed at further strengthening high-level engagement on adaptation;

141. *Decides* to conduct, in [2017], an assessment of the [enhanced] technical examination [process] of adaptation action with the aim of improving its effectiveness and determining the arrangements for its continuation or reinforcement, as appropriate;

V. NON-PARTY STAKEHOLDERS

142. *Welcomes* the efforts of all actors to address and respond to climate change, including those of civil society, the private sector, financial institutions, cities and other subnational authorities;

143. *Invites* the actors referred to in paragraph 142 above to scale up their efforts and support actions to reduce emissions and/or to build resilience and decrease vulnerability to the adverse effects of climate change;

144. *[Also invites* the actors referred to in paragraph 142 above to demonstrate their continued efforts to address climate change via the Non-State Actor Zone for Climate Action;[21]]

145. *Recognizes* the knowledge, technologies, practices and efforts made by local communities and indigenous peoples to address and respond to climate change;

VI. ADMINISTRATIVE AND BUDGETARY MATTERS

146. *Notes* the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in this decision and requests that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources;

147. *Takes note* of the requirement for additional resources for the implementation of the relevant actions referred to in this decision;

148. *Emphasizes* the urgency of making additional resources available for the implementation of the relevant actions, including the actions referred to in this decision, and the implementation of the work programme referred to in paragraphs 9 above;

149. *Urges* Parties to make voluntary contributions for the timely implementation of this decision, noting the estimated budget requirement for 2016 of USD [X];

150. *Requests* the Executive Secretary to provide an estimate of the budgetary implications of the actions requested in this decision to be undertaken in 2017 for consideration by the SBI at its forty-fourth session, with a view to the SBI making a recommendation thereon to the COP at its twenty-second session.**]**

[21] Available at <http://climateaction.unfccc.int/>.

Annex II

[English only]

Reflections note

This note reflects the textual suggestions made during the discussions of the Contact Group on 4 December 2015 from 15:00 to 18:00 in the form of a tabular summary.[22]

Draft Agreement

Provision	Suggested changes
	Preamble
Pp2	Insert “and provisions” after “principles”
Pp5	Insert “African countries”
Pp6	Insert “Central American isthmus”
Pp6	Insert “small mountainous developing States”
Pp6	Insert “African countries”
Pp9	Insert “sustainable lifestyles and sustainable patterns of consumption and production”
Pp10	Insert “climate change induced displaced people”
	Article 1 (Definitions)
Art. 1	Include reference with regard to developing country Parties, including countries with economies in transition (as in footnote 6)
	Article 2 (Purpose)
Art. 2	Bracket entire Article
Art. 2.1	Bracket “In order to strengthen the global response to the threat of climate change, Parties agree to take urgent action and enhance cooperation and support”
Art. 2.1	Insert “in accordance with equity and common but differentiated responsibilities”
Art. 2.1(c)	Bracket entire paragraph
Art. 2.1(c)	Bracket “that fosters climate resilient and low greenhouse gas emission societies and economies, and”
Art. 2.1(c)	Bracket “transformation” and insert “pathway” or “gradual shift”
Art. 2.2	Insert reference to Mother Earth
Art. 2.2	Insert “integrity and resilience of natural ecosystems”
Art. 2.2	Insert “rights of indigenous peoples”
Art. 2.2	Insert “just transition of the workforce and creation of decent work and quality jobs in accordance with nationally defined development priorities”
Art. 2.2	Bracket “shall”
Art. 2.2	Bracket “, and on the basis of respect for human rights and the promotion of gender equality [and the right of peoples under occupation]”
	Article 2 bis (General)
Art. 2 bis	Bracket entire paragraph
	Article 3 (Mitigation)
Art. 3.1	Insert closing bracket

[22] Note: Proposals to delete or to bracket text are reflected by using the term bracket.

Art. 3.1(b)	Add “[reliable science]” after “[best available science]”
Art. 3.1(d)	Add “[removal of greenhouse gases]” instead of “[decarbonization”]
Art. 3.5	Option for placement after Art. 3.2
Art. 3.5	Bring footnote 6 into the paragraph
Art. 3.7	Add “[Article 12 of the Convention, decision 1/CP.20 and]” after “in accordance with”
Art. 3.8	Bracket all paragraphs as implementation of footnote 1 and remove the no text option
Art. 3.9	Placement in decision Add option of first INDC automatically becoming the contribution under the Agreement[23]
Art. 3.10	Add the starting year for “successive” communication [2020][2021] Address common time frame after 2030 In option 1 replace “after” with “before” and “cycle” with “period”
Art 3.11	Bracket all paragraphs as implementation of footnote 1
Art 3.12	Option for placement in Art. 9 Transparency
Art. 3.14	Option for placement in Art. 9 Transparency In option 2 add opening square bracket
Art. 3.15	Option for placement in Art. 9 Transparency Add into [or REDD-plus] the following “[and the joint mitigation and adaptation approach for the integral and sustainable management of forests]”
Art. 3.16	Option for placement in the Preamble or Art. 2
Art. 3.17	Option for placement in the Preamble or Art. 2
Art. 3.18	Option for placement after Art. 22 as Art .22 bis. Noted that Parties are consulting on textual solutions.
Art. 3.19	Bracket all paragraphs as implementation of footnote 1
Art. 3.20	Add “[guided by the principles and provisions of the Convention, Article 2, paragraph 2, of the Kyoto Protocol and the COP]” after “International Maritime Organization” Bracket “,with a view to agreeing concrete measures addressing these emissions, including developing procedures for incorporating emissions from international aviation and marine bunker fuels into low-emission development strategies” Bracket all paragraphs as implementation of footnote 1
	Article 3 bis (REDD-plus)
Art. 3 bis	Option for placement after Art. 5 Bracket paragraphs 2 and 3
	Article 3ter (Mechanism to support sustainable development)
Art. 3 ter	Bracket all paragraphs as implementation of footnote 1
	Article 4 (Adaptation)
	Include reference to early warning systems
	Make reference to support clearer; that is, who provides support and to whom
Art. 4.1	Include concept of long-term vision
Art. 4.2	Include concept of long-term vision
Art. 4.3(b)	Include concept of “platform”
Art. 4.4	Bracket entire paragraph

[23] Note: This option is included in the decision text, paragraph 22.

Art. 4.5	Include “with a view to implement adaptation” Bracket “, with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions, where appropriate”
Art. 4.6	Bracket “international cooperation and”
Art. 4.7 chapeau	Bracket “shall” and “cooperation for enhancing”
Art. 4.7(b)	Bracket “including those” Include “for the implementation of action”
Art. 4.7(c)	Bracket (in order to allow for consultations with relevant research and systematic observation experts)
Art. 4.7(d)	Bracket “effectiveness”
Art. 4.7(e)	Bracket “, and challenges and gaps in a manner consistent with encouraging good practices”
Art. 4.7(f)	Bracket
Art. 4.8	Bracket
Art. 4.9 chapeau	Exchange for chapeau from compilation text (Art 4.9 chapeau)
Art. 4.9(d)	Include “efforts” at the end of the item
Art. 4.9(e)	Change to “Monitoring and evaluation and learning from national adaptation plans, policies, programmes and actions”
Art. 4.10	Exchange for text from compilation text (paras 7(a), 7(b) and 7 bis)
Art. 4.11 chapeau	Include language from compilation text to reflect the concept ‘’in a manner that does not create an additional burden on developing countries’’
Art. 4.11(b)	Exchange for text from compilation text (Art. 4.11(b))
Art. 4.13	Exchange for text from compilation text (Art. 4.12, option 2)
Art. 4.14	Include reference to Art. 10
	Article 5 (Loss and damage)
	Insert option 1 of the compilation Text as option 1
	Include reference to climate change induced displaced people
	Article 6 (Finance)
Art. 6.6	Concern about “result-based payments”
Art. 6.8	Missing reference to “[and other vulnerable countries]”; however, it was clarified that the reference was indeed contained in the relevant paragraph
Art. 6.9	Missing reference to an indemnization mechanism; however, it was clarified that the reference was indeed contained in the relevant paragraph
Art. 6.10 option 2	Missing reference to the concept of pathways and short-term collective quantified goals and an indication to provide textual proposals in this regard
Art. 6.11	Missing reference to the concept of scaled-up
Art. 6.18	Missing text around the development of guidelines pertaining to measurement, reporting and verification of support
	Article 7 (Technology development and transfer)
Art. 7.2	Add “socially and environmentally sound (technology)”
	Article 8 (Capacity-building)
Art. 8.1 to 8.5	Co-chair announced that corrections were made to the text
Full article	Reference to cross-cutting issues related to transparency
	Article 8 bis

	None
	Article 9 (Transparency)
Art. 3.14 and 3.15	Include a clear reference to the African Group preference, and their consideration should take into account Art. 9
Art. 9.2	Further consider the use of capacities versus capabilities
Art. 9.4 and 9.6	Include reference to the implementation of Parties' respective mitigation commitments
Art. 9.6	Clarify paragraph reference. (Reference was originally to link to substance that is now currently included in the decision text, paragraph 98.)
Art. 9.6 option 2	Further consider TACCC
Art. 9.6 option 2(a)	Insert "[using common metrics and] comparable methodologies as agreed on by the [CMA][COP]" at the end
Art. 9.6 option 2(c)	insert "implementing" between "towards" and "and"
	Article 10 (Global stocktake)
Art. 10.1	Insert "[take stock of the implementation of this Agreement to]" after "periodically"
Art. 10.1	Insert "[the objective of the Convention]" after "towards achieving"
Art. 10.1	Replace "long-term goals" with "long-term temperature goal"
Art. 10.2	Retain reference to 2023
Art. 10.2	Insert "[at regular intervals to be further decided by the CMA]" and bracket "every five years thereafter unless otherwise decided by the CMA"
Art. 10.3	Insert "[taking into account Parties' differentiated responsibilities and commitments under the Convention]"
Art. 10.3	Include reference to aggregate level of ambition communicated by Parties for subsequent periods
	Article 11 (Facilitating implementation and compliance)
Art 11.3 option 1	The rules of procedure of the [mechanism][committee] should be subject to approval by the CMA at its first session
	Articles 12 to 26 (Final clauses)
Art. 12.5	The CMA should adopt its own rules of procedure

Draft Decision

Provision	**Suggested changes**
	Intended nationally determined contributions
Para. 17	The gap in emissions should be indicated in temperature degrees
Para. 19	Include reference to consideration of consistency with below 1.5 °C scenarios in relation to aggregate
	Mitigation
	Bring back paragraphs 34 and 35 from compilation text into decision
	Finance
Para. 68	Missing notion of alternative approaches
Additional paragraph in finance section	Missing notion of modalities regarding the definition of short-term collective quantified goals to be developed by the CMA in the decision section related to Article 6
	Capacity-building

Paras. 91 to 92	Co-chair announced that corrections were made to the text
	Workstream 2
Preamble	Include text on CBDR in the Preamble
Para. 120(f) Accelerated Implementation	Include a revisit of the emission reduction targets by developed country Parties under the Convention or second commitment period of the Kyoto Protocol and increasing the target to 25–40 per cent below 1990 levels by 2020
125 bis Non-Party Stakeholder Engagement	Insert paragraph regarding the Declaration of the World People's Conference on Climate Change and the Defence of Life held in Tiquipaya, Bolivia, from 10 to 12 October 2015
General consistency	References to the body in charge of undertaking work in preparation for the entry into force should be consistent

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Ad Hoc Working Group on the Durban Platform for Enhanced Action
Second session, part twelve
Paris, 29 November to 5 December 2015

Agenda item 3
Implementation of all the elements of decision 1/CP.17

Draft Paris Outcome

Revised draft conclusions proposed by the Co-Chairs

The Ad Hoc Working Group on the Durban Platform for Enhanced Action agreed to transmit the text titled "Draft agreement and draft decision on workstreams 1 and 2 of the Ad Hoc Working Group on the Durban Platform for Enhanced Action" contained in annex I to the Conference of the Parties at its twenty-first session for further consideration. It also agreed to transmit the text contained in annex II to the Conference of the Parties at its twenty-first session.

GE.15-21480(E)

Please recycle

Annex I

Draft agreement and draft decision on workstreams 1 and 2 of the Ad Hoc Working Group on the Durban Platform for Enhanced Action

Work of the ADP Contact Group incorporating bridging proposals by the Co-facilitators[1]

A. DRAFT AGREEMENT

[The Parties to this Agreement,

Pp1 *Being* Parties to the United Nations Framework Convention on Climate Change (hereinafter referred to as "the Convention"),

Pp2 *In pursuit* of the objective of the Convention, and being guided by its principles, including the principle of equity and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances,

Pp3 *Pursuant to the* Durban Platform for Enhanced Action established by decision 1/CP.17 of the Conference of the Parties to the Convention at its seventeenth session,

Pp4 *Recognizing* the intrinsic relationship between climate change, poverty eradication and equitable access to sustainable development, and reaffirming that responses to climate change should aim to meet the specific needs and concerns arising from the adverse impacts of response measures,

Pp5 *Taking account* of the specific needs of developing country Parties, and especially those that are particularly vulnerable to climate-related events,

Pp6 *Taking account also* of the specific needs and special situations of the least developed country (LDC) Parties as set out in Article 4, paragraph 9, of the Convention, and the specific circumstances of small island developing States (SIDS),

Pp7 *Emphasizing* the need to respond to the urgent threat of climate change on the basis of the best available scientific knowledge, in particular, the assessment reports of the Intergovernmental Panel on Climate Change,

Pp8 *[Noting* that the largest share of historical global emissions of greenhouse gases has originated in developed countries, that per capita emissions in developing countries are still relatively low and that the share of global emissions originating in developing countries will grow to meet their social and development needs,]

Pp9 *[Recognizing* that Parties should take action to address climate change in accordance with evolving economic and emission trends, which will continue to evolve post-2020,]

Pp10 Emphasizing the importance of promoting, protecting and respecting all human rights, the right to development, the right to health, and the rights of indigenous peoples, migrants, children, persons with disabilities and people in vulnerable climate situations [, and under occupation,] as well as promoting gender equality and the empowerment of women, while taking into account the needs of local communities, intergenerational equity concerns, and the integrity of ecosystems and of Mother Earth, when taking action to address climate change,

Pp11 *Taking into account* the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities,

[1] Proposals which oppose the inclusion of certain provisions in the Agreement or the Decision do not figure in this text. This is on the understanding that the inclusion of a provision is without prejudice to the views of Parties that may not support the elaboration of any such provision at all. Language that is not bracketed is not necessarily agreed.

Pp12 *Recognizing* the fundamental priority of safeguarding food security and ending hunger, and the particular vulnerabilities of food production systems to the adverse impacts of climate change,

Pp13 *Also recognizing* the importance of the conservation and enhancement, as appropriate, of sinks and reservoirs of greenhouse gases referred to in Article 4, paragraph 1(d), of the Convention, including through internationally agreed approaches [such as REDD-plus and the joint mitigation and adaptation approach for the integral and sustainable management of forests], and of their non-carbon co-benefits,

Pp14 *Affirming* the importance of education, training, public awareness, public participation and public access to information and cooperation at all levels on the matters addressed in this Agreement, and recognizing the importance of engagements of all levels of government and various actors, in accordance with respective national legislations of Parties, in addressing climate change,

Have agreed as follows:

Article 1 *(DEFINITIONS)*

For the purposes of this Agreement, all definitions contained in Article 1 of the Convention apply.

Article 2 *(PURPOSE)*

1. The purpose of this Agreement is [to enhance the implementation of the Convention] [and] [to achieve the objective of the Convention as stated in its Article 2]. In order to strengthen the global response to the threat of climate change, Parties agree to take urgent action and enhance cooperation and support so as:
   (a) To hold the increase in the global average temperature [below 1.5 °C] [or] [well below 2 °C] above pre-industrial levels by ensuring deep reductions in global greenhouse gas [net] emissions;
   (b) To Increase their ability to adapt to the adverse impacts of climate change [and to effectively respond to the impacts of the implementation of response measures and to loss and damage];
   (c) To pursue a transformation towards sustainable development that fosters climate resilient and low greenhouse gas emission societies and economies, and that does not threaten food production and distribution.
2. [This Agreement shall be implemented on the basis of equity and science, and in accordance with the principle of equity and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances, and on the basis of respect for human rights and the promotion of gender equality [and the right of peoples under occupation].]

Article 2bis *(GENERAL)*

1. [All Parties [shall] regularly prepare, communicate [and implement] [intended] nationally determined [contributions][components] [on [mitigation] and adaptation] [undertakings in adaptation planning] [and means of implementation][2] [towards achieving the [purpose of this Agreement as set out in Article 2 of the Convention] [objective of the Convention as set out in its Article 2],] [in accordance with Article 4 of the Convention] [in accordance with the provisions of this Agreement, including the specific provisions related to mitigation and adaptation and means of implementation.]]
2. [Each Party's [intended] nationally determined contribution will represent a progression in the light of Parties' differentiated responsibilities and commitments under the Convention.]
3. [The extent to which developing country Parties will effectively implement this Agreement will depend on the effective implementation by developed country Parties of their commitments on the provision of finance, technology development and transfer and capacity-building.]

[2] Without prejudice to the terminology to be used to describe Parties' commitments, undertakings and efforts under the Paris Agreement

4. [Successive [intended] nationally determined contributions will be [informed by the result of the global stocktake as defined in Article 10 of the Convention] and communicated before the expiry of the previous [intended] nationally determined contribution by the Party concerned.]

Article 3 *(MITIGATION)*

{Collective long-term goal}

1. [Parties [collectively][cooperatively] aim to reach the global temperature goal referred to in Article 2 through:

   (a) [A peaking of global greenhouse gas emissions as soon as possible[, recognizing that peaking requires deeper cuts of emissions of developed countries and will be longer for developing countries]]

   (b) [Rapid reductions thereafter [in accordance with best available science] to at least a X [-Y] per cent reduction in global [greenhouse gas emissions][CO_2[e]] compared to 20XX levels by 2050]];

   (c) [Achieving zero global GHG emissions by 2060-2080]

   (d) [A long-term low emissions transformation] [toward [climate neutrality][decarbonization] [over the course of this century] [as soon as possible after mid-century];

   (e) [Equitable distribution of a global carbon budget based on historical responsibilities and [climate] justice]

   [on the basis of equity and common but differentiated responsibilities and respective capabilities] [in the context of sustainable development and eradication of poverty][while ensuring that food security, production and distribution is not threatened][informed by the best available science].

1bis. [To achieve this, policies and measures should take into account different socio-economic contexts, be comprehensive, cover all relevant sources, sinks and reservoirs of greenhouse gases and adaptation, and comprise all economic sectors [for developed countries]]

{Individual efforts}

2. Each Party shall regularly prepare, communicate [and maintain] [successive] ###[3] and [shall][should][other] [take appropriate domestic measures] [have in place][identify and] [pursue] [implement] [[domestic laws], [nationally determined] policies or other measures] [designed to] [implement][achieve][carry out][that support the implementation of] its ###].

[Possible placeholder for Article 3.8 and 3.9]

[Possible placeholder for context CBDR&RC[, in the light of different national circumstances]]

[Possible placeholder referring to article 4 of the Convention]

[Possible placeholder for support]

{Differentiated efforts}

Option 1:

3. In accordance with Article 4, paragraph 2, of the Convention, developed country Parties and other Parties included in Annex I shall undertake quantified economy-wide absolute emission reduction and limitation commitments/targets, which are comparable, measurable, reportable and verifiable, cover all greenhouse gases and are implemented domestically without any conditions.

3bis. In accordance with Article 4, paragraphs 1, 3, 4, 5 and 7, of the Convention, developing country Parties should undertake diversified enhanced mitigation actions/efforts in a measurable, reportable, and verifiable manner, in

[3] Without prejudice to how the final agreement '###' will refer to the mitigation commitments/contributions/other of Parties and pending resolution to Article 2bis. Options include:
Option 1: Nationally Determined Mitigation [Contribution][Commitment] (NDMC)
Option 2: Nationally Determined Mitigation Component of the Contribution referred to in Article 2bis (NDMCC)
Option 3: Mitigation Component of the [Intended] Nationally Determined Contribution (MCNDC)
Option 4: INDC which can be in the form of co-benefits resulting from the Party's adaptation contributions and economic diversification plans.

the context of sustainable development and supported and enabled by the provision of adequate finance, technology and capacity-building by developed country Parties.

Option 2:

3. **Option (a):** Each Party that has previously [communicated] [implemented] absolute economy-wide emissions reduction or limitation targets should continue to do so and all Parties should aim to do so over time.

   Option (b): Developed country Parties [and other Parties [in a position][that determine] to do so] should take the lead in mitigation efforts, including by [communicating] [and implementing] absolute economy-wide emissions reduction [or limitation] targets and all other Parties should aim to do so over time.

3bis. [Developed country Parties should continue to take the lead].[4]

{*Flexibility*}

4. LDCs [and SIDS][and African states] may communicate their ### at their discretion, including information on strategies, plans and actions for low GHG development, reflecting their special circumstances.

{Support}[5] *(moved up)*

5. **Option 1**: Developed country Parties and other developed Parties included in Annex II to the Convention [and other Parties with the capacity to do so] shall provide new and additional financial resources, technology transfer and capacity-building to meet the agreed full costs incurred by developing country Parties in complying with their obligations under this Article.

   Option 2: Developing country Parties[6] are eligible for support in the implementation of this Article.

   Option 3: The extent to which developing country Parties will effectively implement their commitments will depend on the effective implementation by developed country Parties of their commitments related to financial resources, transfer of technology and capacity-building.

{Progression/ambition}

6. Each Party's successive ### [shall][should][will] represent a progression beyond the Party's previous efforts and reflect its highest possible ambition [based on common but differentiated responsibilities and respective capabilities [[and] in light of different national circumstances [and best available science]] [based on provision of finance, technology and capacity-building to developing countries].[7]

{Information}

7. [In communicating their ###, all Parties shall provide the information necessary for the clarity, transparency and understanding in accordance with decision 1/CP.21 and any subsequent decisions of the CMA].

{Features[8]*}*

8. [**Option 1:** Each Party's ### [shall][should] be quantified or quantifiable, [be unconditional, [9] at least in part], maintain coverage of emissions and removals covered previously, and strive for coverage of all significant emissions and removals over time. Additional guidance may be elaborated by decision [of the CMA][1/CP.21].]

   [**Option 2:** Each Developed country Party's ### shall be quantified, cover all key categories of emissions by sources and removals by sinks and use common Intergovernmental Panel on Climate Change (IPCC) metrics,

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4 Overlaps with Option (b).

5 Placeholder until support is addressed.

6 Without prejudice to the final outcome of the negotiations, in all cases in the draft Agreement and the draft Decision text where, in the context of support, it says "developing country Parties" read "developing country Parties [, including Parties whose special circumstances are recognized by the COP][and other Parties in need of support, including countries with economies in transition]"

7 Depending on the placeholder on 3.1, 3.2 or 3.3 and pending resolution on 2bis.

8 Note: some of the sub-items listed below feature in the October/November text taken up elsewhere in Article 3 or the Agreement (eg link to global stocktake, environmental integrity).
Note: some Parties suggested that some of these sub-items could be taken up in Article 9.
Note: Flexibility for LDCs, SIDS and African States addressed elsewhere in Article 3.

9 [South Africa wishes its reservation on the original text in brackets to be recorded: "We do not accept any unconditional part of contributions that are nationally determined, particularly if this is a precondition under Art. 17"]

guidance and guidelines for the estimation of greenhouse gas emissions and removals; and others strive to communicate this over time. Additional guidance may be elaborated by the [CMA] [APA] at its [x] session.]

[Option 3: Guidance on the features of ### to be elaborated by decision [of the CMA] [1.CP/21].]

[Option 4: Guidance on the features of ### to be elaborated by decision of the CMA at its x session.]

{Timing}

{First communication}

9. Each Party [shall][should] communicate its first ### no later than [upon ratification or acceptance of][upon joining] this Agreement.

{Subsequent communication*}*

10. **Option 1:** Successive ### shall be communicated by Parties after completion of the current implementation cycle.

Option 2: Each Party shall [communicate its successive][, update or confirm its] ### every five years [on a synchronized basis] [, taking into account the outcomes of the global stocktake referred to in Article 10].

{Ex ante process}

11. [Each Party shall submit an intended ### [x months prior to][well before] the final communication. All Parties shall participate in a [preparatory] process that [facilitates][promotes] clarity, transparency and understanding of the intended ###, including their aggregate effect in the light of the long-term temperature goal referred to in Article 2, including though the production of an aggregate synthesis report. The [preparatory] process shall be conducted in accordance with the modalities and procedures to be adopted by the CMA at its first session.]

{Adjustments}

12. A Party may at any time adjust its existing ### with a view to enhancing its level of ambition [, in accordance with the simplified adjustment procedure referred to in Article 19, paragraph 3]. [Adjustments towards lower ambition levels may only be communicated in case the [developing country] Party's efforts are [severely] affected by an extreme natural event, economic shock or force majeure.][Developing country Parties may adjust their ### at their discretion depending upon the adequacy and availability of finance, technology development and transfer and capacity-building support.]

{Housing}

13. **Option 1:** [The ### communicated by Parties shall be [listed][published] [in an online registry maintained by the secretariat][in Annex [X] to this Agreement][on the UNFCCC website].]

Option 2: [The ### communicated by developed country Parties shall be inscribed in Annex A to this Agreement.

The ### communicated by developing country Parties shall be inscribed in Annex B to this Agreement.]

{Accounting} [10]

14. [**Option 1:** [In the context of of][In tracking progress towards achieving] ###, each Party shall, taking into account decision 1.CP/21 and any future guidance [elaborated for this purpose and agreed][adopted] by the CMA [at its [x][first] session][and may be amended by any subsequent decisions of the CMA], account for anthropogenic emissions and removals included in its ###, [promote][apply the principles of] transparency, accuracy, [completeness], [comparability], and consistency, and [avoid double counting][apply arrangements to avoid double counting] where internationally transferred mitigation outcomes are used [, so as to improve the environmental integrity of the agreement].]

[**Option 2:** In tracking progress towards achievement of their ###, Parties shall apply the principles of transparency, accuracy, completeness, comparability, consistency, avoidance of double counting, and environmental integrity, as further elaborated in [para x] decision 1/CP.21 and any further guidance to be developed under paragraph 14(a) below. Furthermore:

[10] 1.This reflection is without prejudice to placement between mitigation and transparency or anywhere else.
2.This reflection is without prejudice to differentiation and how and if it is treated in any part of the agreement.
3.The formulation of ### would need to reflect the outcome of work being undertaken in relation to Article.

(a) The CMA shall, at its first session, adopt the principles and guidance for tracking progress towards its ###, including with respect to [land use], and internationally transferred mitigation outcomes in accordance with [para x] decision 1/CP.21. Such principles and guidance shall apply to ### to be communicated for subsequent contribution cycles. Parties may elect to apply such guidance to their first ###;

(b) Parties shall ensure methodological consistency between the definition of the ### and its implementation, including with respect to paragraph [X] above;

(c) Parties shall report on progress towards achievement of their ### in accordance with the relevant provisions of Article 9, [para x] decision 1/CP.21.

(d) Parties shall ensure that internationally transferred mitigation outcomes used to meet its ### are real, permanent, additional and verified, and are not double-counted.]

{Methods and guidance}

15. [**Option 1:** In the context of their ###, when recognizing and implementing mitigation actions in respect of anthropogenic emissions and removals [including from [land use] [or REDD-plus]], Parties may draw from [/build on] existing methods and guidance under the Convention and from the IPCC.

Option 2: In elaborating guidance further to paragraph 10 with respect to anthropogenic emissions and removals from [land use], including forests, Parties shall take into account any relevant decisions of the COP/CMP.

Option 3: The rules and guidance related to tracking of progress towards achieving ### accounting shall be adopted by the [CMA][APA] at its [x] session.]

{Response measures}

[Preamble: Parties acknowledge the importance of cooperation, including around economic diversification to reduce the adverse impacts of the implementation of response measures.]

16. *[*[Parties shall give full consideration to what actions are necessary under this Agreement to meet the specific needs and concerns of developing country Parties arising from the impact of the implementation of response measures, including in terms of economic diversification, and taking into consideration that poverty eradication and social and economic development are the first and overriding priorities of developing country Parties.

Parties agree to enhance actions under this Agreement, including through strengthening institutional arrangements, and to adopt modalities and procedures for enhancing those arrangements. To this end the CMA shall establish a cooperative mechanism to address the adverse impacts of the implementation of response measures on developing country Parties, as included in decision -/CP.21.]]

{Unilateral measures}

17. *[*[Developed country Parties shall not resort to any form of unilateral measures against goods and services from developing country Parties on any grounds related to climate change, recalling the principles and provisions of the Convention, in particular its Article 3, paragraphs 1, 4 and 5, and Article 4, paragraphs 3, 5, 7, 8, 9 and 10, and taking into account the principles of equity, common but differentiated responsibilities and the obligations of developed country Parties to provide financial resources, transfer of technologies and capacity-building support to developing country Parties.]]

{REIOs}

18. [Parties, including regional economic integration organizations and their member States, may jointly communicate and[/or] implement their ### [detailing in their joint communication the combined level of ### and individual levels of the ### of each member State of that regional economic integration organization. If Parties acting jointly do so in the framework of, and together with, a regional economic integration organization, any alteration in the composition of the organization after adoption of this Agreement shall not affect existing ### under this Agreement. Any alteration in the composition of the organization shall apply only for the purposes of those commitments under Article 3 that are adopted subsequent to that alteration. If Parties act jointly to implement their ### in the framework of, and together with, a regional economic integration organization that is itself a Party to this Agreement, each member State of that regional economic integration organization individually and together with the regional economic integration organization shall, in the event of failure to achieve the total combined level of ###, be responsible for the level of its ### as communicated in accordance with this Article.]

{Cooperative approaches}

[Option 1:[11]

19. Parties acknowledge the importance of [cooperation in][cooperative approaches for] implementing and enhancing the ambition of climate action [at the international level].

19alt. Parties may also cooperate in the implementation of ###.

[19bis. Where cooperative approaches involve the use of internationally transferred mitigation outcomes towards ###, Parties participating shall [safeguard] [promote] sustainable development and environmental integrity and shall apply robust accounting to ensure, inter alia, that double counting is avoided, taking into account relevant guidance adopted for this purpose by the CMA [taking into account guidance adopted at the national level].]

[19ter. A share of proceeds for adaptation shall apply.]

Option 2:

19. Cooperative approaches of Parties, based on Article 4.7 of the Convention, must ensure the enhancement of mitigation outcomes together with adaptation co-benefits to be verified internationally but non-transferrable.]

{International transport emissions}

20. **[**Parties [shall][should][other] pursue the limitation or reduction of greenhouse gas emissions from international aviation and marine bunker fuels, working through the International Civil Aviation Organization and the International Maritime Organization, respectively, with a view to agreeing concrete measures addressing these emissions, including developing procedures for incorporating emissions from international aviation and marine bunker fuels into low-emission development strategies.]

[Article 3 bis] *(REDD-PLUS)*

1. [Mechanisms for forest mitigation and adaptation are] [A REDD-plus mechanism is] hereby defined.
2. The REDD-plus mechanism consists of relevant decisions of the COP, including decisions 9/CP.19 to 15/CP.19 and decision -/CP.21.
3. The purpose of the REDD-plus mechanism shall be to incentivize the reduction of emissions from deforestation and forest degradation and to promote the conservation and sustainable management of forests and enhancement of forest carbon stocks in developing countries, while enhancing the non-carbon benefits of the multiple functions of forests, including alleviating poverty and building ecosystem resilience.
4. [The Joint Mitigation and Adaptation Mechanism (JMA) is established to support the integral and sustainable management of forests as an alternative to results-based payments, in accordance with decision X/CP.21.]

[Article 3 ter[12]] *(MECHANISM TO SUPPORT SUSTAINABLE DEVELOPMENT)*

{Proposed Mechanism 1}

1. **[**[Establishes a multi window mechanism][Establishes a framework for sustainable development mechanisms][A mechanism to support sustainable development in [developing country] Parties is hereby established] under the authority and guidance of the CMA, shall be supervised by a body designated by the CMA, and shall aim to:
   (a) Promote sustainable development in developing country Parties;
   (b) Incentivise and facilitate participation in mitigation action by public and private entities authorised by a Party;
   (c) [Enhance mitigation ambition by developing country Parties, by incentivising supplementary voluntary climate action, beyond their ###][Fully respect the mitigation contributions of participating Parties to ensure that the global mitigation effort is not undermined];
   (d) [Provide for net global emission reductions through the cancellation of a share of units generated, transferred, used or acquired];

[11] Note connection to Article 3.10 and Article 9 and Article 11

[12] Explanatory Note: Two mechanisms are proposed below as (i) and (ii), each with the alternative option of no mechanism. The two mechanisms proposed are not presented as options to each other.

(e) [Assist Parties with a ### that reflects an absolute target in relation to a base year to fulfil their ###, through the use of mitigation outcomes from mitigation activities in developing countries][Consider the variety and dynamics of national circumstances of Parties];

(f) [Ensure environmental integrity of Parties' cooperative mitigation actions, including ensuring that such mitigation shall not be claimed more than once, in accordance with accounting guidance elaborated under Article [3.10]].]

2. [The CMA shall ensure that a share of the proceeds from certified project activities are used to cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.]

3. [The CMA shall adopt modalities and procedures for the first window of the above mentioned mechanism building on the mechanism defined under [Article 12][Article 6] of the Kyoto Protocol and related decisions of the CMP.]

{Proposed Mechanism 2}

1. [Establishes a mechanism to support holistic and integrated approaches to sustainable development in harmony with nature to be available to assist developing country Parties in fulfilling their ### including in a balanced manner mitigation, adaptation, provision of finance, technology transfer and capacity building. This mechanism shall be under the authority and guidance of the CMA, and shall be supervised by a body designated by the CMA, and aim to:

(a) Enhance of mitigation and adaptation ambition and the provision or mobilization of public financing technology transfer and capacity building in an integrated manner for climate action;

(b) Enhance non-market-based approaches and enable participation in joint cost-effective mitigation and adaptation actions by public and private entities acting under the responsibility of a Party.

(c) Support the implementation of the joint mitigation and adaptation approach for the integral and sustainable management of forests as an alternative policy approach to results-based payments.

(d) Fully respect mitigation contributions of participating Parties to ensure that the global mitigation effort is not undermined.]

2. [The CMA shall adopt modalities and procedures for the mechanism referred above on its first session.]

Article 4 *(ADAPTATION)*

1. Parties hereby establish the global goal of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, [in accordance with the objective, principles and provisions of the Convention, including common but differentiated responsibilities and respective capabilities,] with a view to [contributing to sustainable development] [and] [ensuring adaptation in the context of the goal of holding the increase in the global average temperature [below 2 °C][below [2 or] 1.5 °C] referred to in Article 2].

2. Parties recognize that adaptation is a global challenge faced by all with local, subnational, national, regional and international dimensions, and that it is a key component of and contribution to the long-term global response to climate change to protect people, livelihoods and ecosystems[, taking into account the urgent and immediate needs of those developing countries that are particularly vulnerable].

3. [The global goal for adaptation shall be the basis for, inter alia:

(a) Assessment of the adequacy of support from developed country Parties to developing country Parties. This assessment will be undertaken through strengthened measurement, reporting and verification of support;

(b) Recognition of the adaptation efforts of developing country Parties;

(c) Recognition of increased adaptation needs and associated costs in the light of mitigation efforts, taking into account the need for adaptation regardless of the level of mitigation reached, and also taking into account the relationship between aggregate mitigation ambition, associated climate change impacts, and adaptation needs and cost, while recognizing there are limits to adaptation.]

4. **[**Parties recognize that adaptation [will][may] be needed regardless of the level of mitigation reached [and that greater aggregate levels of mitigation can reduce the need for additional adaptation efforts.]]

5. Parties acknowledge that adaptation action should follow a country-driven, gender-responsive, participatory and fully transparent approach, taking into consideration [human rights,][the rights of people under occupation,]

vulnerable groups, communities and ecosystems, and should be based on and guided by the best available science and, as appropriate, traditional, indigenous peoples knowledge and local knowledge systems, with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions, where appropriate.

6. Parties further recognize the importance of international cooperation and support for adaptation efforts and the importance of taking into account the needs of those developing countries that are particularly vulnerable, recognizing the particular vulnerabilities of the least developed countries (LDCs) and small island developing States (SIDS).

7. Parties [shall][should] enhance their cooperation for enhancing action on adaptation, taking into account the Cancun Adaptation Framework, including with regard to:

   (a) Sharing information, good practices, experiences and lessons learned, including, as appropriate, as these relate to the science, planning, policies and implementation of adaptation actions;

   (b) Strengthening institutional arrangements, including those under the Convention, to support the synthesis of relevant information and knowledge and the provision of technical support and guidance to the Parties;

   (c) Strengthening scientific knowledge on climate, including research and systematic observation of the climate system, in a manner that informs the development and delivery of climate services and to support decision-making;

   (d) [Assessment of the [effectiveness][adequacy] of support [referred to in paragraph 3(a)] of this Article with a view to ensuring transparency and accountability;]

   (e) Assisting [developing] country Parties to identify effective adaptation practices, adaptation needs, priorities, support provided and received for adaptation actions and efforts, and challenges and gaps in a manner consistent with encouraging good practices;

   (f) Improving the effectiveness and durability of adaptation actions.

8. Encourages United Nations agencies to support the efforts of Parties to implement the actions referred to in paragraph 7 of this Article, taking into account the provisions of paragraph 5 of this Article.

9. Each Party should engage in the implementation of adaptation planning processes and actions, including the development or enhancement of relevant plans, policies and/or contributions, which may include:

   (a) Implementation of adaptation actions, undertakings and/or efforts;

   (b) The process to formulate and implement national adaptation plans;

   (c) Assessment of climate change impacts and vulnerability with a view to formulating nationally determined prioritized actions, taking into account vulnerable people, places and ecosystems;

   (d) Strengthening enabling environments for the implementation of adaptation;

   (e) Monitoring, evaluating and learning from adaptation plans, policies, programmes and actions;

   (f) Building resilience of socioeconomic and ecological systems, including through economic diversification and sustainable management of natural resources.

10. Each Party may submit an adaptation communication [or communications on actions, undertakings and/or efforts on adaptation referred to in paragraph 9(a) and (b) of this Article], which may include its priorities, support needs, plans and actions.

11. The adaptation communication [or communications on actions, undertakings and/or efforts on adaptation] referred to in paragraph 10 of this Article may be:

   (a) Submitted independently, as a component of or in conjunction with another communication, including a national adaptation plan[, an intended] nationally determined contribution and/or a national communication;

   (b) Updated or submitted [periodically] [in conjunction with mitigation cycles].

12. [The adaptation communication [or communications on action, undertakings and/or efforts on adaptation] referred to in paragraph 10 of this Article [shall][may] be [recorded in a registry][made publicly available by the secretariat [on the UNFCCC website]] [in accordance with modalities to be decided by the [CMA][CMP] at its first session].]

13. [Developing country Parties should receive continuous and enhanced international support for the implementation of Article 4, paragraphs 9–11, in accordance with the provisions of Articles 6, 7 and 8.]

14. [There shall be a [high-level session][global stocktake] on adaptation every [X] years, with the purpose of [enhancing the implementation of adaptation action based on the adaptation communication [or communications on action, undertakings and/or efforts on adaptation] referred to in paragraph 9 of this Article, assessing the adequacy of support and recognizing the adaptation efforts of developing country Parties], guided by modalities to be adopted by the [CMA][CMP] at its first session.]

15. [[The AC, the LEG, the AF, the GCF, the LDCF, the SCCF, the TEC, the CGE, and other relevant bodies][institutional arrangements for adaptation] under the Convention shall serve this Agreement. The CMA shall, based on a review of institutional arrangements under the Convention, further elaborate the adaptation framework for this Agreement in order to enhance its coherence and effectiveness, building on, consolidating and coordinating institutional arrangements relevant to adaptation under the Convention.]

Suggested paragraphs for Article 6:

X. [[Developed country Parties][Parties included in Annex II to the Convention] shall provide developing country Parties with long-term, scaled-up, predictable, new and additional finance, technology and capacity-building for the implementation of Article 4, paragraphs 9, 10 and 11[, in accordance with [the relevant provisions][Article 4] of the Convention,] recognizing the urgent and immediate needs and special circumstances of developing country Parties, especially those that are particularly vulnerable.]

Y. [Developed country Parties shall communicate on their provision of support to developing countries.]

Article 5 *(LOSS AND DAMAGE)*

Option I: The following text to be included as Article 5 *(Loss and Damage)*

Option II: The following text to be part of Article 4 alongside adaptation provision

1. [The Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts shall serve this Agreement.

2. Upon the completion of its review at the twenty-second session of the COP,[13] the Warsaw International Mechanism shall be subject to the authority and guidance of the CMA and supported through the Financial Mechanism of the Convention.

3. A climate change displacement coordination facility shall be established under the [Warsaw International Mechanism][CMA] to help coordinate efforts to address climate change induced displacement, migration and planned relocation.

4. A process to develop approaches to address irreversible and permanent damage resulting from human-induced climate change will be initiated under the [Warsaw International Mechanism][CMA] with a view to completing this process within four years.]

Article 6 *(FINANCE)*

1. **Option 1:** [Over time, finance flows should be consistent with [the transformation to][a pathway towards] low-emission and climate-resilient [societies and economies][development], in the context of countries' sustainable development priorities and efforts to eradicate poverty.]

   Option 2: [Climate finance, as defined in Article 1 of this Agreement, shall be provided from developed country Parties and other Parties included in Annex II of the Convention in the context of developing country Parties' needs, sustainable development priorities, food security and efforts to eradicate poverty.]

2. **Option 1:** [[Developed country Parties [and other developed country Parties included in Annex II to the Convention][and Parties in a position to do so] [should take the lead and]][All Parties in a position to do so] [shall][should][other] provide [support][[new and additional] financial resources] to assist developing country Parties with respect to both mitigation and adaptation [as well as addressing loss and damage] [and others in a position to do so should complement such efforts].]

   Option 2: [Developed country Parties and other developed Parties included in Annex II to the Convention shall provide new and additional, adequate, predictable, accessible, sustained and scaled-up financial resources to developing countries to enhance actions with respect to both mitigation and adaptation to contribute to the

[13] Decision 2/CP.19, paragraph 15.

achievement of the [objective][purpose] of this Agreement, based on the principles and in accordance with the provisions of the Convention.]

Option 3: [Parties in a position to do so, including developed country Parties, should provide support to assist developing country Parties in need of support with respect to both mitigation and adaptation.]

3. [Parties should integrate climate considerations, including resilience, into international development assistance.]

4. **Option 1: [**All Parties shall take action to mobilize, and/or facilitate the mobilisation of, climate finance in line with their respective and evolving responsibilities and capabilities. Some Parties may need support in order to take action.]

   [The actions taken by Parties in the mobilization of climate finance shall reflect and be dynamically adapted to future changes in needs, developments and environmental and economic realities, reflecting evolving capabilities and responsibilities.]

   Option 2: [Developed country Parties and other Parties included in Annex II to the Convention shall mobilize financial resources beyond their previous efforts, supporting country-driven strategies, and taking into account the needs and priorities of developing country Parties.]

   Option 3: [As part of a shared effort, Parties should cooperate to promote the mobilization of climate finance from a wide variety of sources, instruments and channels, including public, private, bilateral, multilateral, domestic, and international.]

5. [Parties should strive to improve enabling environments and policy frameworks to attract and mobilize climate finance, noting that cooperative action and support may enhance such efforts.]

6. [Parties should mobilize enhanced results-based payments for verifiable achieved emission reductions related to existing approaches under the Convention.]

7. [Parties should reduce international support for high-emission [and maladaptive] investments and enhance international support for low-emission and climate-resilient investments.]

8. [Parties recognise that the appropriate pricing of greenhouse gas emissions in its many forms, is an important instrument for the reorientation of investment and finance flows consistent with a pathway towards low emission and climate resilient economies and societies.] *{Placement proposal: to be moved to section on mitigation}*

9. **Option 1:** [Parties recognize the role of a wide variety of sources, public and private, bilateral and multilateral, including alternative sources.]

   Option 2: [Public funds from developed country Parties, distinct from Official Development Assistance, will be the main source of finance [indemnization mechanism based on historical responsibilities], noting that it may include a wide variety of sources, public and private, bilateral and multilateral, including additional sources. In the mobilization of finance from various sources, Parties shall abide by the principles of fiscal sovereignty and avoid incidence on developing country Parties[, particularly disguised distortions to trade].]

10. **Option 1:** [The mobilization of climate finance [shall][should][other] be scaled up [in a predictable and transparent manner] [beyond previous efforts] [from USD 100 billion per year] from 2020[, recognizing the important role of the Green Climate Fund in the scaling up of financial resources for the implementation of this agreement, as well as other multilateral mechanisms and other efforts].]

    Option 2: [The provision and mobilization of financial resources by developed country Parties and other developed Parties included in Annex II shall represent a progression beyond their previous efforts towards achieving short-term collective quantified goals for the post 2020 period to be periodically established and reviewed. Financial resources shall be scaled up from a floor of US$100 billion per year, including a clear burden-sharing formula, and in line with needs and priorities identified by developing country Parties in the context of contributing to the achievement of the [objective][purpose] (Article 2/XX) of this Agreement. It shall take into account an equitable regional distribution of financial resources and a gender-sensitive approach, and include the implementation of Articles 5 and 6 of the Convention.]

    Option 3: [As part of a shared mobilization effort Parties should, in accordance with paragraphs X-Y, enhance the scale and effectiveness of climate finance by: mobilizing climate finance from a wide variety of instruments and channels; provide, when in a position to do so, support to developing countries in need of support; appropriately prioritize support; improve enabling environments; integrate climate considerations into international development assistance; and reduce international support for high-emissions investments.]

11. The provision of financial resources [should][shall] aim to achieve a balance between adaptation and mitigation, taking into account country-driven strategies, and the priorities and needs of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, including LDCs, SIDS, and Africa, considering the need for public and grant-based resources for adaptation.

12. [[Developed country Parties][Parties included in Annex II to the Convention] shall provide developing countries with long-term, scaled-up, predictable, new and additional finance, technology and capacity-building for the implementation of Article 4, paragraphs 8–10[, in accordance with [the relevant provisions][Article 4] of the Convention,] recognizing the urgent and immediate needs and special circumstances of developing country Parties, especially those that are particularly vulnerable.]

13. [The CMA shall ensure that adequate support is available to the International Mechanism to address Loss and Damage as defined in Article (XX), as well as to promote and support the development and implementation of approaches to address irreversible and permanent damage resulting from human-induced climate change.]

14. [The provision of financial resources shall ensure facilitated and enhanced direct access, pursue a country-driven approach, through simplified procedures, and readiness support to developing countries [especially those countries that are particularly vulnerable to the adverse effects of climate change], including to capacity-constrained developing countries, LDCs, SIDS and Africa. It shall likewise ensure adequacy and predictability of resources, and avoid double counting.]

15. [[Parties and the institutions serving this Agreement should simplify procedures for accessing financial resources to and improving readiness for developing country Parties, [including][in particular] the LDCs and SIDS][In the provision of support, and in order to enhance the impact and country-driven approach of such support, readiness and country programme measures [shall][should] be prioritized. The institutions serving this agreement [shall][should] enhance the delivery of resources for readiness and simplify approval procedures for accessing finance [by developing countries], in particular for LDCs, SIDS, and African States [and other vulnerable countries], in a coordinated manner].] *{Placement proposal: to be moved to decision section}*

16. **Option 1:** [[Developed country] Parties [and other developed Parties included in Annex II] [shall][should][other] [periodically][biennially] communicate [relevant, indicative] information on [the [provision] [and mobilization] [and implementation] of [financial resources][support to developing countries], including [available] quantitative and qualitative information on the] projected [efforts to mobilize [and attract] climate finance][levels of public [climate finance][financial resources to be provided to developing country Parties]].]

    Option 2: [Developed country Parties and other developed Parties included in Annex II shall biennially communicate on the provision and mobilization of financial resources, including quantitative and qualitative information on the projected levels of public financial resources to be provided to developing country Parties.]

    Option 3: [Parties should periodically communicate relevant, indicative information about their plans related to paragraphs X-Y, as appropriate.]

17. [The [stocktake shall take into account available information by [developed country] Parties and Agreement bodies on efforts related to climate finance][CMA shall facilitate the communication of finance efforts for the stocktake referred to in Article 10, taking into account the [annual reports][biennial assessment] of the Standing Committee on Finance].] *{Pending outcome of discussions on Article 10}*

18. [Developed country Parties and other developed Parties included in Annex II to the Convention shall at least biennially provide transparent, complete, consistent, comparable and accurate information on financial resources provided and mobilized through public interventions to developing country Parties, in accordance with guidelines to be adopted by the CMA at its first session, including through a clear definition of climate finance as stipulated in Article 1 of this agreement.] *{Note: some of the issues pertaining to specific reporting modalities as identified in this paragraph may be moved to Article 9}*

19. The Financial Mechanism established by Article 11 of the Convention, including [the Green Climate Fund and the Global Environment Facility as] its operating entities [and related funds], shall serve as the financial mechanism of this Agreement.

[**Option 1** *(Paragraph 20)*:

20. [The CMA shall provide guidance, for consideration by the COP, on the policies, programme priorities, and eligibility criteria of the operating entities of the Financial Mechanism, acknowledging that the relevant decisions of the COP agreed before adoption of this Agreement shall apply mutatis mutandis.]

Option 2: *(Paragraphs 20-22)*:

20. [The guidance to the entity or entities entrusted with the operation of the financial mechanism of the Convention in relevant decisions of the COP, including those agreed before the adoption of the agreement, shall apply mutatis mutandis to the Financial Mechanism of this Agreement.

21. The existing operating entities of the Financial Mechanism (the Green Climate Fund and the Global Environment Facility, including the Special Climate Change Fund and the Least-Developed Countries Fund) shall serve this Agreement. Other funds may be established under this agreement.

22. The Adaptation Fund Board, established by decision 1/CMP.3 shall be designated as an operating entity entrusted with the operation of the financial mechanism, referred to in Article xx, for the implementation of this Agreement.]]

Article 7 *(TECHNOLOGY DEVELOPMENT AND TRANSFER)*

1. All Parties[, in accordance with the principles and provisions of the Convention, in particular Article 4 [and Article 11]], noting the importance of technology for the implementation of mitigation and adaptation actions under this Agreement and recognizing existing deployment and dissemination efforts, [shall][should] strengthen cooperative action [to accelerate and upscale] [on] [technology development and transfer] [through] [, inter alia:

   (a) [Improving endogenous capacities and enabling environments according to nationally determined needs and priorities, in accordance with Article 4, paragraph 5, of the Convention];

   (b) [Addressing barriers [in accessing to][for] the transfer of safe, appropriate and environmentally and socially sound technologies [by developing countries];]

   (c) Fostering cooperative approaches to research and development].

2. Parties share a long-term vision on the importance of fully realizing technology development and transfer in order to improve resilience to climate change and to reduce GHG emissions.

3. A technology framework is hereby established to provide overarching guidance to the work of the Technology Mechanism in promoting and facilitating enhanced action on technology development and transfer in order to support the implementation of this Agreement, in pursuit of the long-term vision referred to in paragraph 2 above.

4. **[**In accordance with Article 4, paragraph 5, of the Convention, developed country Parties shall provide financial resources to address barriers created by policies and intellectual property rights (IPRs) and facilitate access to and the deployment of technology, including, inter alia, by utilizing the Financial Mechanism and/or establishing a funding window under the GCF to meet the full costs of IPRs of environmentally sound technologies, know-how and such technologies will be provided to developing country Parties free of cost in order to enhance their actions to address the adverse effects of climate change.]

5. The Technology Mechanism shall serve this Agreement [and shall be strengthened in line with its mandate for this purpose].

6. **Option 1:** Developing country Parties are eligible for support in the implementation of this Article.

   Option 2: [In accordance with Article 4, paragraphs 3[and 5][, 5 and 9], of the Convention,] developed country Parties and other Parties included in Annex II to the Convention shall [continue to provide regular reports] [regularly prepare, communicate and implement their commitments on the support of technology provisions for [developing country] Parties] [provide enhanced support], including financial support, for strengthening cooperative action and the implementation of the technology framework through the Technology Mechanism [and the Financial Mechanism]. [The financial support shall be made available through, inter alia, the Financial Mechanism.] [The overall implementation of the commitments will be assessed periodically through a global stocktake in accordance with Article 10 of this Agreement.]

   Option 3: [Developed country] [All] Parties shall regularly communicate the progress [of implementation] [made in implementing the provisions] [pertaining to the financial provisions] and support for technology development and transfer in accordance with Articles 6 and 9 of this Agreement [, taking into account the provisions of the Convention] [in a measurable, reportable and verifiable manner]. [The overall implementation of the commitments will be periodically assessed through a global stocktake in accordance with Article 10 of this Agreement.]

7. **[**Developed country Parties and other Parties included in Annex II to the Convention shall provide support for the research, development and application of environmentally sound technologies and facilitate the transfer of and access to such technologies for developing country Parties, including by, inter alia, strengthening

cooperative action, providing financial resources to address barriers caused by the absence of domestic research and development capability and innovations, and enhancing access to environmentally sound technologies and know-how.]

Article 8 *(CAPACITY-BUILDING)*

1. Capacity-building under this Agreement should enhance the capacity and ability of:

   Option 1: [countries];

   Option 2: [developing country Parties, in particular countries with the least capacity, such as LDCs and SIDS and African countries];

   Option 3: [developing country Parties, in particular countries with the least capacity, such as LDCs and SIDS and African countries, in accordance with the principles and provisions of the Convention],

   [to take effective climate change action, including, inter alia, to implement adaptation and mitigation actions, and facilitate technology development, dissemination and deployment, access to climate finance, relevant aspects of education, training and public awareness, and the transparent, timely and accurate communication of information.]

2. Capacity-building should be country-driven, based on and responsive to national needs, and foster country ownership of Parties, [in particular, for developing country Parties,] including at the national, subnational and local levels. Capacity-building should be guided by lessons learned, including those from capacity-building activities under the Convention, and should be an effective, iterative process that is participatory, cross-cutting and gender-responsive.

3. [All Parties should cooperate to enhance the capacity of developing country Parties to implement this Agreement. Developed country Parties should enhance support for actions for capacity-building in developing countries].

4. [All Parties enhancing the capacity of developing country Parties to implement this Agreement, including through regional, bilateral and multilateral approaches, shall regularly communicate on these actions or measures on capacity-building. Developing country Parties shall regularly communicate progress made on implementing capacity-building plans, policies, actions or measures to implement this Agreement].

5. [Institutional arrangements under the Convention shall be enhanced, as appropriate, in support of capacity-building for the implementation of this Agreement]. [In order to further enhance capacity-building in accordance with this Agreement, an international capacity-building mechanism is hereby established to serve the Agreement.]

Article 8 bis

Parties shall cooperate in taking measures, as appropriate, to enhance climate change education, training, public awareness, public participation and public access to information, recognizing the importance of these steps with respect to enhancing actions under this Agreement.

Article 9 *(TRANSPARENCY)*

1. **Option 1:** A robust transparency framework covering both action and support, differentiated between developed and developing countries, building on the arrangements under the Convention, related decisions of the COP and mechanisms established by the Cancun Agreements (decision 1/CP.16), applicable to all Parties, and providing flexibility to developing countries is hereby established.

   Option 2: A unified and robust transparency framework, covering both action and support, with built-in flexibility to take into account Parties' differing capacities, and applicable to all Parties is hereby established.

   Option 3: A robust, tiered transparency framework covering both action and support, applicable to all Parties, based on self-differentiation with no backsliding and on national capabilities and intended nationally determined contributions, and that builds on and enhances existing arrangements under the Convention and decision 1/CP. 16 is hereby established.

   Option 4: Building on existing arrangements under the Convention, a transparency framework for action and support that takes into account Parties different capacities and is applicable to all Parties is hereby established.

2. The transparency framework shall provide flexibility in the implementation of the provisions of this Article to developing country Parties in the light of their capabilities. The modalities, procedures and guidelines referred to in paragraph 6 of this Article shall reflect such flexibility.

3. The transparency framework shall be guided by the principles of the Convention and building on the provisions and arrangements under the Convention, recognizing the special circumstances of the least developed countries and small island developing States, and be implemented in a facilitative, non-intrusive, non-punitive manner, respectful of national sovereignty, and avoid placing undue burden on Parties and the secretariat.

4. The purpose of the framework for transparency of action is to:

   (a) Provide a clear understanding of climate change actions in the light of the objective as set by Article 2 of the Convention;

   (b) Provide a clear understanding of the anthropogenic emissions by sources and removals by sinks of individual Parties;

   (c) Facilitate understanding of global aggregate emissions and removals to inform the global stocktake under Article 10;

   (d) Ensure clarity and tracking of progress made towards {insert the relevant phrase from outcome of Article 3.2} and achieving individual Parties' respective mitigation {insert the relevant phrase from outcome of Article 3.2} under Article 3;

   (e) Provide clarity on Parties' adaptation actions under Article 4, including good practices, priorities, needs and gaps.

5. The purpose of the framework for transparency of support is to:

   (a) Provide a clear understanding of the support provided and received by relevant individual Parties in the context of climate change actions under Articles 3 and 4;

   (b) Achieve, to the extent possible, a full overview of aggregate financial support provided, to inform the global stocktake under Article 10;

   (c) Ensure clarity and tracking of progress made by developed country Parties in providing support in accordance with Articles 6, 7 and 8;

   (d) Ensure clarity and tracking of support needed and received by developing country Parties in accordance with Articles 6, 7 and 8;

   (e) Ensure the avoidance of double counting of financial resources provided.

6. **Option 1:** Each Party, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives, and circumstances, shall provide transparent, accurate, complete, consistent, and comparable information in accordance with guidelines referred to in paragraph 6 of this Article on:

   Option 2: Each Party shall regularly provide the following information in accordance with guidelines referred to in paragraph 6 of this Article:

   (a) Its national inventory of anthropogenic emissions by sources and removals by sinks of greenhouse gases;

   (b) Projections of anthropogenic emissions by sources and removals by sinks of greenhouse gas;

   (c) Progress made towards and achieving individual Parties' respective mitigation {insert the relevant phrase from outcome of Article 3.2} under Article 3*;*

   (d) Climate change impacts and actions taken to build resilience and reduce vulnerability, and progress on adaptation actions under Article 4*;*

   (e) Support provided and received, as relevant, *including specific information required under Article 6.13, 6.14, 7 and 8.*

7. **Option 1**: The information provided by each Party as required under this Article shall be subject to a technical expert review, with additional flexibility to be given to LDCs and SIDS as requested by them, in accordance with [common] guidelines and procedures adopted by the CMA.

   The review shall provide a thorough, objective and comprehensive technical assessment of the Party's implementation and achievement of its nationally determined mitigation {insert the relevant phrase from outcome of Article 3.2} and other requirements of the Agreement, analyze the extent to which the Parties reporting is in line with the guidelines adopted by the CMA, and identify any areas for improvement in reporting

and possible capacity building, in consultation with the Party concerned. The technical expert review shall be carried out by an expert review team that shall produce a report, to be consulted with the Party concerned, for publication by the secretariat and consideration by the CMA.

[The report shall identify any issues related to compliance.] {review following outcomes from Article 11} A multilateral and facilitative examination shall consider the information above.

Option 2: All information provided by developed country Parties, and shall be reviewed through a robust technical review process followed by a multilateral assessment process, and result in a conclusion with consequences for compliance;

All the information provided by developing country Parties should be analyzed through a technical analysis process followed by a multilateral facilitative sharing of views, result in a summary report, in a manner that is nonintrusive, non-punitive and respectful of national sovereignty, according to the level of support received from developed country Parties.

8. The CMA shall, at its first session, building on experience from the arrangements related to transparency under the Convention, and elaborating on the provisions in this Article, adopt [common] modalities, procedures and guidelines, as appropriate, for the transparency of action and support. {Placeholder to revisit this para pending outcomes of discussion on accounting}

9. The transparency arrangements under the Convention, including national communications, biennial reports and biennial update reports, international assessment and review (IAR) and international consultation and analysis (ICA), shall form part of the experience drawn upon for the development of modalities, procedures and guidelines under paragraph 8 of this Article.

10. Support shall be provided to developing countries for the implementation of paragraphs 6 and 7 of this Article.

11. [Developed country Parties shall provide support to developing country Parties in the implementation of this Article.] {to be revised pending global solution in Article 6}

12. Support shall also be provided for the building of transparency-related capacity of developing countries on a continuous basis.

Article 10 *(GLOBAL STOCKTAKE)* [14,15]

1. The CMA shall periodically assess the [overall][collective] progress towards achieving the purpose[16] of this Agreement and its long-term goals. It shall do so in a comprehensive and facilitative manner, considering mitigation, adaptation and the means of implementation and support[17].

2. The CMA shall undertake its first global stocktake in 2024 and every five years thereafter unless otherwise decided by the CMA.

3. The outcome of the global stocktake shall inform Parties in [undertaking their efforts and] enhancing their successive actions and support, as appropriate, [and in [preparing][and][finalizing] any successive INDC18] in accordance with relevant provisions of this Agreement, with a view to achieving the purpose and long-term goals [and increasing the ambition] of this Agreement in light of [the best available science][and][equity] [and in accordance with the principle of common but differentiated responsibilities and respective capabilities, in light of different national circumstances].

Article 11 *(FACILITATING IMPLEMENTATION AND COMPLIANCE)*

Option 1: ***(paragraphs 1 to 4)***

14 The current text is dependent on the way other Articles of the Agreement develop through the negotiations. It may be necessary to revise the text accordingly.

15 Support for developing countries' participation in the stocktake should be taken into consideration in the appropriate section.

16 This language is dependent on a link to the Convention in Article 2, otherwise a reference to the [ultimate] objective of the Convention may be needed.

17 If references to differentiation are not included in Articles 2, 3, 4, 5, 6 and 7, such language may be needed in this Article.

18 Placeholder to reference the Parties' actions as related to Articles 3,4,5,6 and 7.

1. A [mechanism][committee] [with differentiation between developed country Parties and developing country Parties][applicable to all Parties] to promote [[and address] compliance with] and facilitate implementation [of the provisions of this Agreement], which shall be expert-based [and facilitative] in nature, and which shall act in a manner that is transparent, non-punitive and non-adversarial [for developing country Parties][for all Parties], is hereby established. [It shall pay particular attention to the respective national capabilities and circumstances of Parties.]

2. The objective of the [mechanism][committee] referred to in paragraph 1 of this Article is:

Option (**a):** To promote [and][,] facilitate [and incentivize] effective implementation of [and compliance with] [Articles [3] [, 4, 6, 7, 8] and [9] of] this Agreement.

Option (**b):** [To promote compliance][To address cases of non-compliance] by developed country Parties[, including through the development of an indicative list of consequences], taking into account the cause, type, degree and frequency of non-compliance, and to facilitate implementation by developing country Parties through provision of adequate financial resources and transfer of technology.

3. The [mechanism][committee] shall report annually to the CMA and shall operate under modalities and procedures adopted by the CMA at its first session. The [mechanism][committee] shall elaborate its rules of procedure, which shall be subject to approval by the CMA at its second session.

4. [Placeholder for text by Parties on composition]

Option 2:

An International Tribunal of Climate Justice is hereby established to address cases of non-compliance with the commitments of developed country Parties on mitigation, adaptation, provision of finance, technology development and transfer, capacity-building, and transparency of action and support, including through the development of an indicative list of consequences, taking into account the cause, type, degree and frequency of non-compliance.]

Article 12 *(CMA)*

1. The Conference of the Parties, the supreme body of the Convention, shall serve as the meeting of the Parties to this Agreement.
2. Parties to the Convention that are not Parties to this Agreement may participate as observers in the proceedings of any session of the Conference of the Parties serving as the meeting of the Parties to this Agreement. When the Conference of the Parties serves as the meeting of the Parties to this Agreement, decisions under this Agreement shall be taken only by those that are Parties to this Agreement.
3. When the Conference of the Parties serves as the meeting of the Parties to this Agreement, any member of the Bureau of the Conference of the Parties representing a Party to the Convention but, at that time, not a Party to this Agreement, shall be replaced by an additional member to be elected by and from among the Parties to this Agreement.
4. The CMA shall keep under regular review the implementation of this Agreement and shall make, within its mandate, the decisions necessary to promote its effective implementation. It shall perform the functions assigned to it by this Agreement and shall:
   (a) Establish such subsidiary bodies as deemed necessary for the implementation of this Agreement;
   (b) Exercise such other functions as may be required for the implementation of this Agreement.
5. The rules of procedure of the Conference of the Parties and the financial procedures applied under the Convention shall be applied mutatis mutandis under this Agreement, except as may be otherwise decided by consensus by the CMA.
6. The first session of the CMA shall be convened by the secretariat in conjunction with the first session of the Conference of the Parties that is scheduled after the date of entry into force of this Agreement. Subsequent ordinary sessions of the CMA shall be held in conjunction with ordinary sessions of the COP, unless otherwise decided by the CMA.
7. Extraordinary sessions of the CMA shall be held at such other times as may be deemed necessary by the CMA or at the written request of any Party, provided that, within six months of the request being communicated to the Parties by the secretariat, it is supported by at least one third of the Parties.

8. The United Nations, its specialized agencies and the International Atomic Energy Agency, as well as any State member thereof or observers thereto not party to the Convention, may be represented at sessions of the CMA as observers. Any body or agency, whether national or international, governmental or non-governmental, which is qualified in matters covered by this Agreement and which has informed the secretariat of its wish to be represented at a session of the CMA as an observer, may be so admitted unless at least one third of the Parties present object. The admission and participation of observers shall be subject to the rules of procedure referred to in paragraph 4(b) of this Article.

Article 13 *(SECRETARIAT)*

1. The secretariat established by Article 8 of the Convention shall serve as the secretariat of this Agreement.
2. Article 8, paragraph 2, of the Convention on the functions of the secretariat, and Article 8, paragraph 3, of the Convention on arrangements made for the functioning of the secretariat shall apply mutatis mutandis to this Agreement. The secretariat shall, in addition, exercise the functions assigned to it under this Agreement and by the CMA.

Article 14 *(SBSTA AND SBI)*

1. The Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation (SBI) established by Articles 9 and 10 of the Convention shall serve, respectively, as the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation of this Agreement. The provisions of the Convention relating to the functioning of these two bodies shall apply mutatis mutandis to this Agreement. Sessions of the meetings of the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation of this Agreement shall be held in conjunction with the meetings of, respectively, the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation of the Convention.
2. Parties to the Convention that are not Parties to this Agreement may participate as observers in the proceedings of any session of the subsidiary bodies. When the subsidiary bodies serve as the subsidiary bodies of this Agreement, decisions under this Agreement shall be taken only by those that are Parties to this Agreement.
3. When the subsidiary bodies established by Articles 9 and 10 of the Convention exercise their functions with regard to matters concerning this Agreement, any member of the bureaux of those subsidiary bodies representing a Party to the Convention but, at that time, not a Party to this Agreement, shall be replaced by an additional member to be elected by and from among the Parties to this Agreement.

Article 15 *(BODIES AND INSTITUTIONAL ARRANGEMENTS TO SERVE AGREEMENT)*

1. Subsidiary bodies or other institutional arrangements [and mechanisms] established by or under the Convention, in addition to those subsidiary bodies and institutional arrangements explicitly referred to in this Agreement, [shall] [may] serve this Agreement [unless otherwise decided by the CMA] [[upon a decision of the CMA]. [Such decision shall specify the functions to be exercised by such bodies or arrangements]].
2. The CMA may provide further guidance to those subsidiary bodies and institutional arrangements [including the functions to be exercised by such bodies and institutional arrangements] [including for members of such bodies and institutional arrangements nominated by Parties to the Convention that are not Parties to this Agreement] [to the extent that these bodies and institutional arrangements serve this Agreement].

Article 16 *(SIGNATURE AND INSTRUMENTS OF RATIFICATION, ACCEPTANCE, APPROVAL OR ACCESSION)*

1. This Agreement shall be open for signature and subject to ratification, acceptance or approval by States and regional economic integration organizations that are Parties to the Convention. It shall be open for signature at the United Nations Headquarters in New York from 22 April 2016 to 21 April 2017. Thereafter, the Agreement shall be open for accession from the day following the date on which it is closed for signature. Instruments of ratification, acceptance, approval or accession shall be deposited with the Depositary.
2. Any regional economic integration organization that becomes a Party to this Agreement without any of its member States being a Party shall be bound by all the obligations under this Agreement. In the case of regional economic integration organizations with one or more member States that are Parties to this Agreement, the organization and its member States shall decide on their respective responsibilities for the performance of their

obligations under this Agreement. In such cases, the organization and the member States shall not be entitled to exercise rights under this Agreement concurrently.

3. In their instruments of ratification, acceptance, approval or accession, regional economic integration organizations shall declare the extent of their competence with respect to the matters governed by this Agreement. These organizations shall also inform the Depositary, who shall in turn inform the Parties, of any substantial modification in the extent of their competence.

Article 17 *(FURTHER REQUIREMENTS AND DECISION-MAKING RIGHTS)*

[A Party to the Convention shall [submit] [communicate] to the secretariat when it deposits its instrument of ratification, acceptance, approval or accession a nationally determined [mitigation] [contribution] [commitment] [in accordance with Article 2bis] in order to become Party to the Agreement. [The nationally determined [mitigation] [contribution] [commitment] shall be legally binding on that Party upon entry into force of this Agreement for that Party.]]

Article 18 *(ENTRY INTO FORCE)*

1. This Agreement shall enter into force on the thirtieth day after the date on which at least [X] [50][55][100] [the ¾] Parties to the Convention [including all Annex I Parties] [and] [or] [on which Parties to the Convention accounting for [55][60][70][X] per cent of total [net] global greenhouse gas emissions in [[date][1990][2000][2010][2012]] have deposited their instruments of ratification, acceptance, approval or accession [whichever occurs first, coming into effect not earlier than 1 January 2020]][.][, with such Parties to the Convention accounting for X per cent of total [net] global greenhouse gas emissions [in [date] [1990][2000][2010][2012]] [but not earlier than 1 January 2020].]

2. [For the purposes of paragraph 1 of this Article, "total global [net] greenhouse gas emissions" [of such Parties] means the [total global [net anthropogenic] greenhouse gas emissions [and removals] as estimated by the data set used by the Intergovernmental Panel on Climate Change in its Fifth Assessment Report for analysis of emissions trends][most up-to-date amount communicated on or before the date of adoption of this Agreement by the Parties to the Convention either in their national communications submitted in accordance with Article 12 of the Convention or in their biennial reports or biennial update reports submitted in accordance with decision 1/CP.16 of the Conference of the Parties].]

3. For each State or regional economic integration organization that ratifies, accepts or approves this Agreement or accedes thereto after the condition[s] set out in paragraph 1 of this Article for entry into force [has] [have] been fulfilled, this Agreement shall enter into force on the thirtieth day after the date of deposit by such State or regional economic integration organization of its instrument of ratification, acceptance, approval or accession.

4. For the purposes of paragraph 1 of this Article, any instrument deposited by a regional economic integration organization shall not be counted as additional to those deposited by its member States.

Article 19 *(AMENDMENTS)*

1. The provisions of Article 15 of the Convention on the adoption of amendments to the Convention shall apply mutatis mutandis to this Agreement.

2. [Notwithstanding paragraph 1 of this Article, a Party may propose an adjustment [[to] [enhance] the efforts expressed by its [mitigation commitment] inscribed in] Annex [A or B] [or] [X] to this Agreement. A proposal for such an adjustment shall be communicated to the Parties by the secretariat at least three months before the session of the CMA at which it is proposed for adoption.]

3. [An adjustment proposed by a Party [to enhance] the efforts expressed by its [mitigation commitment] inscribed in Annex [A or B] [or] [X] to this Agreement shall be considered adopted by the CMA unless more than three fourths of the Parties present and voting object to its adoption. The adopted adjustment shall be communicated by the secretariat to the Depositary, who shall circulate it to all Parties, and it shall enter into force on 1 January of the year following the communication by the Depositary. Such adjustments shall be binding upon Parties.]

Article 20 *(ANNEXES)*

1. Annexes to this Agreement shall form an integral part thereof and, unless otherwise expressly provided for, a reference to this Agreement constitutes at the same time a reference to any annexes thereto. Such annexes shall

be restricted to lists, forms and any other material of a descriptive nature that is of a scientific, technical, procedural or administrative character.

2. The provisions of Article 16 of the Convention on the adoption and amendment of annexes to the Convention shall apply mutatis mutandis to this Agreement[, except in respect of the annex containing nationally determined mitigation commitments].

Article 21 *(SETTLEMENT OF DISPUTES)*

The provisions of Article 14 of the Convention on settlement of disputes shall apply mutatis mutandis to this Agreement.

Article 22 *(VOTING)*

1. Each Party shall have one vote, except as provided in paragraph 2 of this Article.
2. Regional economic integration organizations, in matters within their competence, shall exercise their right to vote with a number of votes equal to the number of their member States that are Parties to this Agreement. Such an organization shall not exercise its right to vote if any of its member States exercises its right, and vice versa.
3. [Without prejudice to the provisions of Article 15, paragraph 3, of the Convention, Parties shall make every effort to reach agreement on all matters by consensus. If such efforts to reach consensus have been exhausted and no agreement has been reached, a decision shall, as a last resort, be adopted by a three-fourths majority vote of the Parties present and voting.]

Article 23 *(DEPOSITARY)*

The Secretary-General of the United Nations shall be the Depositary of this Agreement.

Article 24 *(RESERVATIONS)*

No reservations may be made to this Agreement.

Article 25 *(WITHDRAWAL)*

1. At any time after three years from the date on which this Agreement has entered into force for a Party, that Party may withdraw from this Agreement by giving written notification to the Depositary.
2. Any such withdrawal shall take effect upon expiry of one year from the date of receipt by the Depositary of the notification of withdrawal, or on such later date as may be specified in the notification of withdrawal.
3. Any Party that withdraws from the Convention shall be considered as also having withdrawn from this Agreement.

Article 26 *(LANGUAGES)*

The original of this Agreement, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

[Placeholder for annexes]]

B. DRAFT DECISION

[The Conference of the Parties,

Pp1 *Recalling* decision 1/CP.17 on the establishment of the Ad Hoc Working Group on the Durban Platform for Enhanced Action,

Pp2 *Also recalling relevant* decisions of the Conference of the Parties, including decisions 2/CP.18, 1/CP.19 and 1/CP.20,

Pp3 *Welcoming* the outcome of "Transforming our world: the 2030 Agenda for Sustainable Development", in particular its goal 13, and the outcome of the Addis Ababa Action Agenda of the third International Conference on Financing for Development,

Pp4 *Recognizing* that climate change represents an urgent and potentially irreversible threat to human societies and the planet and thus requires the widest possible cooperation by all countries, and their participation in an effective and appropriate international response, with a view to accelerating the reduction of global greenhouse gas emissions,

Pp5 *Also* r*ecognizing* that climate change represents an urgent and potentially irreversible threat to human societies and that deep reductions in global emissions will be required in order to achieve the ultimate objective of the Convention and *emphasizing* the need for urgency to address climate change,

I. ADOPTION

1. *Decides* to adopt the Paris Agreement under the United Nations Framework Convention on Climate Change (hereinafter referred to as "the Agreement"), contained in the annex;
2. *Requests* the Secretary-General of the United Nations to be the Depositary of the Agreement and to have it open for signature in New York, the United States of America, from 22 April 2016 to 21 April 2017;
3. *Invites* the Secretary-General to convene a high-level signature ceremony for the Agreement on 22 April 2016;
4. *Also invites* all Parties to the Convention to sign the Agreement at the ceremony to be convened by the Secretary-General, or at their earliest opportunity, and to deposit their respective instruments of ratification, acceptance or approval, or instruments of accession, where appropriate, as soon as possible;
5. *Recognizes* that Parties to the Convention may provisionally apply all of the provisions of the Agreement pending its entry into force, and *requests* Parties to provide notification of any such provisional applications to the Depositary;
6. *Notes* that the work of the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP) in accordance with decision 1/CP.17, paragraph 4, has been completed;
7. *Decides* to establish, the Ad Hoc Working Group on the Paris Agreement (APA) under the same arrangements, mutatis mutandis, concerning the election of officers to the bureau of the ADP;
8. *Also decides* that the APA shall prepare for the entry into force of the Agreement and for the convening of the first session of the Conference of the Parties serving as the meeting of the Parties to the Agreement (CMA);
9. *Further decides* to oversee the implementation of the work programme resulting from the relevant requests contained in this decision;
10. *Requests* the APA to report regularly to the Conference of the Parties (COP) on the progress of its work and to complete its work by the first session of the CMA;
11. *Decides* that the APA shall hold its sessions starting in 2016 in conjunction with the sessions of the Convention subsidiary bodies and shall prepare draft decisions to be recommended through the COP to the CMA for consideration and adoption at its first session;

II. INTENDED NATIONALLY DETERMINED CONTRIBUTIONS

12. *Welcomes* the intended nationally determined contributions (INDCs) that have been communicated by Parties in accordance with decision 1/CP.19, paragraph 2(b);

13. *Reiterates* its invitation to all Parties that have not yet done so to communicate to the secretariat their INDCs towards achieving the objective of the Convention as set out in its Article 2 as soon as possible and well in advance of the twenty-second session of the Conference of the Parties and in a manner that facilitates the clarity, transparency and understanding of the INDCs;

14. *Requests* the secretariat to continue to publish the INDCs communicated by Parties on the UNFCCC website;

15. *Reiterates* its call to developed country Parties, the operating entities of the Financial Mechanism and any other organizations in a position to do so to provide support for the preparation and communication of the INDCs of Parties that may need such support;

16. *Takes note* of the synthesis report on the aggregate effect of INDCs communicated by Parties by 1 October 2015, contained in document FCCC/CP/2015/7;

17. [*Notes* with concern that the estimated aggregate greenhouse gas emission levels resulting from the INDCs in 2025 and 2030 do not fall within least-cost 2 ˚C scenarios, and that much greater emission reduction efforts than those associated with the INDCs will be required in the period after 2025 and 2030 in order to hold the temperature rise to below 2 ˚C or 1.5 ˚C above pre-industrial levels;]

18. [Also notes, in this context, the adaptation needs expressed by developing countries in their INDCs];

19. *Requests* the secretariat to update the synthesis report referred to in paragraph 16 above so as to cover all the information in the INDCs communicated by Parties pursuant to decision 1/CP.20 by 4 April 2016 and to make it available by 2 May 2016;

20. *[[Decides][Invites* the President of the COP] to convene a facilitative dialogue among Parties to take stock of the collective efforts of Parties in [2018][2019] in relation to progress towards the long-term goal referred to in Article 3, paragraph 1, of the Agreement and to inform the preparation of INDCs pursuant to Article 3, paragraph 8, of the Agreement;]

20bis. *Requests* the Intergovernmental Panel on Climate Change (IPCC) to provide a special report [in 2018] [in 2019] on the impacts of global warming of 1.5 ºC above pre-industrial levels and the global greenhouse gas emission pathways required to achieve the long-term temperature goal;

III. DECISIONS TO GIVE EFFECT TO THE AGREEMENT

MITIGATION (RE-ARRANGED ACCORDING TO TOPIC)

{Collective long-term goal}

21. *[Requests [X] to* [Develop modalities to implement the distribution of a global carbon budget based on climate justice, considering historical responsibilities, ecological footprint, capabilities, state of development and population;]

{First communication}

22. [*Affirms* that if a Party that has communicated its first INDC before joining the agreement, the INDC communicated will be automatically recognized as its ### under this Agreement, unless otherwise decided by the Party concerned; and that if a Party that has not communicated its first INDC before joining the agreement, the INDC may be communicated by that Party at any time after joining the agreement.]

23. [*Acknowledges* that Parties may adjust the submission of their first ### to make it consistent with the rules and guidance for accounting for anthropogenic greenhouse gas emissions and removals pursuant to Article 3, paragraph 14 of the Agreement[, consistent with Article 3, paragraph 7, of the Agreement][, subject to the requirement that Parties ensure that there is no backsliding in the level of mitigation effort];

{Features}

24. [[*Decides*][*Notes*] that [Parties] [will][should][may] [developed countries will and others strive to] [developed countries will] communicate ###s that:

    (a) [Are quantified or quantifiable [or qualitative];]

(b) [Are unconditional, at least in part] [19] [, with developing countries able to communicate additional levels of mitigation action able to be implemented with support;] [noting that developing countries' ### may be expressed as an unconditional target and a conditional target based on the provision of finance and/or technology transfer and/or capacity-building;][20]

(c) [Consider maximizing adaptation co-benefits, and may include contributions in the form of co-benefits resulting from the Party's adaptation contributions and economic diversification plans;]

(d) [Strive to include all key categories of anthropogenic emissions and removals;]

(e) [Continue to include any sources, sink or activity that has been previously included, or explain any exclusion in that regard][and its impact][on the achievement of its ###]

(f) [Ensure that the NDMC is based on real and verifiable information, and that baselines are transparently defined;]

(g) [Use [common] Intergovernmental Panel on Climate Change (IPCC) metrics, guidance and guidelines for the estimation of greenhouse gas emissions and removals as agreed by the CMA;]

(h) [Take into account the relevant outcomes of the global stocktake and the process to facilitate implementation as set out in Articles 10 and 11, respectively;]

24bis. [*Notes* that Parties' ### may:

(a) [Prioritize actions that are immediately implementable, scalable and results oriented, including REDD-plus;]

(b) [Use a joint mitigation and adaptation approach for the integral and sustainable management of forests as an alternative policy approach to results-based payments.]]

{Information}

Option 1: *(paragraphs 25–25bis)*

25. *Decides* that in order to facilitate clarity, transparency and understanding, the information to be provided by Parties communicating their ### in accordance with Article 3, paragraph 6, of the [Agreement], [shall][should] include, [as appropriate,] inter alia, quantifiable information on the reference point (including, as appropriate, a base year), time frames and/or periods for implementation, scope and coverage, planning processes, assumptions and methodological approaches including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals, and how the Party considers that its ### is fair and ambitious, in light of its national circumstances, and how it contributes towards achieving the objective of the [Agreement] as set out in its Articles 2 and Article 3, paragraph 1, of the Agreement;

25bis. The [APA] will develop further guidance for the information to be provided by Parties to be adopted by the CMA.

Option 2: *(paragraphs 25–25bis)*

25. *Decides* that in order to facilitate clarity, transparency and understanding, the information to be provided by Parties communicating their ### in accordance with Article 3, paragraph 6, of the [Agreement], [shall][should] include, [as appropriate,] inter alia:

(a) Quantifiable information on the reference point (including, as appropriate, for the type of ###, a base year);

(b) Time frames and/or periods for implementation;

(c) [Pools, gases and key categories of emissions by sources and removals by sinks included in the ###;]

(d) The base year or baseline of commitment;

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[19] [South Africa wishes its reservation on the original text in brackets to be recorded: "We do not accept any unconditional part of contributions that are nationally determined, particularly if this is a precondition under Art. 17"]

[20] [South Africa wishes its reservation on the original text in brackets to be recorded: "We do not accept any unconditional part of contributions that are nationally determined, particularly if this is a precondition under Art. 17"]

(e) Assumptions, metrics, methodological approaches and key data sources, including those for projected baselines, if any and estimating and accounting for anthropogenic greenhouse gas emissions and removals;

(f) Assumptions and methodological approaches including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals;

(g) How the Party considers that its ### is fair and ambitious, in light of its national circumstances; and

(h) How it contributes towards achieving the objective of the [Agreement] as set out in its Article 2 and Article 3, paragraph 1, of the Agreement;

25bis. The [APA] will develop further guidance for the information to be provided by Parties to be adopted by the CMA.

{Housing}

26. *[Requests* the [SBI] to develop modalities and procedures for the operation and use of the registry referred to in Article 3, paragraph 13, of the Agreement, for consideration by the APA at its [X] session, with a view to the APA making a recommendation thereon to the CMA at its first session;]

27. *[Also requests* the secretariat to make available an interim registry in the first half of 2016 for the recording of ### submitted in accordance with Article 3 of the Agreement, pending the adoption by the CMA of the modalities and procedures referred to in paragraph 26 above;]

{Accounting}

28. *(Paired with Article 3.14 (accounting)):* [[Recognizing the importance of environmental integrity, transparency, accuracy, completeness, comparability, consistency and avoiding double counting,] Also decides [that the rules and guidance for the accounting [of action and support] referred to in Article 3, paragraph 14[, and Article 9, paragraph 4,] of the Agreement, for consideration and adoption by the CMA at its first session, should ensure that]:

(a) [Each Party shall] [Parties] ensure methodological consistency [between the communication of nationally determined mitigation [contributions][commitments][other] and the implementation thereof][throughout each implementation term and when tracking progress towards the achievement thereof];

(b) [Each Party shall] [Parties] include an explanation for the exclusion [its/their] nationally determined mitigation [contribution][commitment][other] of any key categories of emissions or removals and strive to include them over time;

(c) Parties shall, once a source, sink or activity is accounted for in a nationally determined mitigation [contribution][commitment][other], continue to include it or provide an explanation of why it has been excluded [and an assessment of the impact that such exclusion has on its fulfillment of the nationally determined mitigation [contribution][commitment][other]];

(d) [Each Party shall:

(i) To the extent that they use its baselines, maintain them unchanged during implementation, except for technical corrections;

(ii) To the extent that they use its projected baselines, reflect the emissions and removals that would be expected without additional action];

(e) Parties use common metrics and methodologies adopted by the Intergovernmental Panel on Climate Change for the estimation of greenhouse gas emissions and removals;

(f) [Each Party shall account for both anthropogenic emissions and removals and may exclude non-anthropogenic and legacy effects;] *[move (a)-(d) to Agreement]*

(g) [Internationally transferred mitigation outcomes used by any Party to meet its nationally determined mitigation [contribution][commitment][other] [will avoid double counting and] are supplemental to domestic action;]]

(h) [The use of internationally transferred mitigation outcomes is on the basis of an equivalent adjustment by both the transferring Party and the acquiring Party;]

(i) [The use of realistic and meaningful reference values, based on historical and actual data or projections consistent with long-term trends in historical emissions, builds, where appropriate, on approaches

established under the Convention and its instruments; in case of any change to reference values, Parties shall provide an explanation of the change;]]

{Methods and guidance}

29. *[Decides that each Party may, prior to the elaboration of guidance further to paragraph 3.10, [use][draw from][build on] methodological guidance adopted by the COP/CMP, related to [land use] and REDD-plus.]*

30. [*Also decides* that the APA shall develop, for consideration and adoption by the CMA at its first session, principles and guidelines for all actions in the land sector that:

    (a) Ensure the integrity and resilience of natural ecosystems;

    (b) Respect customary and sustainable land-use systems and the security of indigenous peoples' and local communities' land tenure;

    (c) Are undertaken in an equitable, transparent and participatory manner;

    (d) Ensure food security;

    (e) Are consistent with all relevant international obligations;]

31. [*Decides* that Parties shall, when pursuing all mitigation actions, ensure that they are consistent with all relevant obligations, ensure the integrity and resilience of natural ecosystems and respect customary and sustainable land-use systems;]

{Long-term strategies}

32. *[Decides that Parties should formulate and communicate longer-term low-emission development strategies and requests the secretariat to make Parties' communicated low-emission development strategies publicly available.]*

{Response measures}

33. **[***[Decides* to establish a cooperative mechanism by the COP at its [X] session to address the specific needs and concerns of developing country Parties[, including those Parties whose special circumstances are recognized by the COP], arising from the impacts of the implementation of response measures, by building on the work of the forum to develop a specific work programme to be undertaken by the mechanism that shall be implemented, with a view to recommending specific tools, actions and programmes to address the impacts and the implementation gaps in order to avoid and minimize adverse effects on developing country Parties[, including those Parties whose special circumstances are recognized by the COP].[Unilateral measures shall not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade].[Parties strengthen existing arrangements by establishing a cooperative mechanism (platform) under the Convention to manage the transition to low greenhouse gas emission pathways, which would identify and then measure the impacts and which would use existing tools as much as possible and further develop tools to address identified gaps and ensure their operationalization. The governing body shall develop and adopt modalities for a permanent forum under the SBSTA]].

{REIOS}

34. *Decides*, in relation to Parties, including regional economic integration organizations, implementing their ### jointly under Article 3, paragraph 18, of the Agreement, that:

    (a) Parties, including regional economic integration organizations, that have reached an agreement to implement their ### jointly shall notify the secretariat of the terms of such an agreement on the date of the deposit of their instruments of ratification, acceptance or approval of the Agreement, or accession thereto;

    (b) The secretariat shall inform Parties to the Agreement [and Parties to the Convention] of the terms of the agreement to implement jointly referred to in paragraph 34(a) above;

    (c) Any alteration to the composition of the Parties, including regional economic integration organizations, implementing jointly shall not affect any then current ### and shall become applicable for the purpose of the Agreement to the next ### submitted by that organization, by Parties implementing jointly with Parties that have become members of that organization, or by Parties implementing jointly;

{Cooperative approaches}

35. *[(paired with option 1, Article 3.19 (cooperative approaches)):* Requests the [APA] to develop and recommend the guidance referred to under Article 3, paragraph 16, of the Agreement for adoption by the CMA at its first session.]

{Mechanism to support sustainable development}

{Proposed Mechanism 1}

36. [The CMA shall adopt modalities and procedures for the above mentioned mechanism at its first session on the basis of:

(a) Voluntary participation approved by each Party involved;

(b) Real, measurable, and long term benefits related to the mitigation of climate change;

(c) Reductions in emissions that are additional to any that would occur in the absence of the certified activity;

(d) Certification of mitigation outcomes resulting from each mitigation activity by designated operational entities;

(e) Multiple windows for participation;

(f) Eligibility rules for participation that promote fair and equitable access for all Parties;

(g) Experience gained with existing mechanisms and approaches adopted under the Convention and its related legal instruments;

36bis. *Requests* the APA to recommend modalities and procedures for the mechanism to support sustainable development established under Article [3 ter] for adoption by the CMA at its first session.]

{Proposed Mechanism 2}

37. [*Requests* the CMA to recommend modalities and procedures for the mechanism to support sustainable development under [Article 3ter] for adoption by the CMA at its first session.]

ADAPTATION

38. *Requests* the [SBSTA][AC and the LEG] to develop methodologies and approaches to recognize the adaptation efforts of developing countries to respond to climate change, as referred to in Article 4, paragraph 3(b), of the Agreement, and make recommendations for adoption by the CMA at its [X] session.

39. *[Decides* that the activities referred to in Article 4, paragraph 9, of the Agreement should:

(a) Not be prescriptive or result in the duplication of efforts;

(b) Facilitate country-owned and country-driven action;

(c) Involve and facilitate the participation of relevant stakeholders, in particular women[, local communities] and indigenous peoples, in planning, decision-making and monitoring and evaluation, and give priority to the poorest and most vulnerable communities and people;

(d) Be participatory and inclusive, building on existing community-driven and traditional adaptation efforts[, in all interested developing countries, in particular in the least developed countries (LDCs), small island developing States (SIDS) and countries in Africa][, recognizing the urgent and immediate needs and special circumstances of developing country Parties, especially those that are particularly vulnerable];

(e) Promote climate resilience and sustainable development trajectories;

(f) [Facilitate access to, while not being a prerequisite for, financial, technological and capacity-building support for adaptation action;]]

40. *Requests* the [SBSTA][AC and the LEG] to prepare recommendations on the communication [or communications on actions, undertakings and/or efforts on adaptation] referred to in Article 4, paragraphs 10 and 11 of the Agreement, for the consideration of the CMA at its first session.

41. *Also requests* the [SBSTA][AC and the LEG] to develop jointly modalities and procedures for the operation of the registry referred to in Article 4, paragraph 12, of the Agreement, with a view to making recommendations to the CMA at its first session.

42. **Option 1:** *Further requests* the secretariat to make available an interim registry in 2016 for the recording of adaptation communication [or communications on actions, undertakings and/or efforts on adaptation] referred to in Article 4, paragraph 10 of the Agreement, pending the adoption by the CMA of the modalities and procedures referred to in paragraph 41 above;

Option 2: [*Further requests* the [AC][LEG][SBSTA][SBI] to [record][compile] the priorities and needs communicated by Parties as established in Article 4, paragraph 10, of the Agreement, with a view to the APA making a recommendation to the [CMA][CMP] at its [first][X] session;]

43. *Requests*, as referred to in Article 4, paragraph 15, of the Agreement, the [SBI and the SBSTA][CMA] to review the work of the adaptation-related institutional arrangements under the Convention in 2017, in order to ensure and enhance the coherence of their work, and to prepare recommendations for consideration at COP 23, and to identify improvements in the articulation of these arrangements in order to respond effectively to the needs of Parties, for consideration by the CMA at its [X] session.

44. *Also requests* the Adaptation Committee to:

(a) Establish and maintain stronger linkages with the GCF, [taking into account the balanced 50:50 approach of the allocation of financing between mitigation and adaptation,] the AF and other funds;

(b) Evaluate information on finance, technology and capacity-building support for adaptation;

(c) Provide recommendations on existing methodologies for adaptation;

(d) Take any other appropriate actions to enhance and support adaptation efforts via finance, technology transfer and capacity-building;

(e) Identify, as outlined in Article 4, paragraph 3(c), of the Agreement, the implications of the aggregate mitigation effort for projected regional impacts on the basis of the best available science, with the aim of assisting developing countries particularly vulnerable to the adverse effects of climate change[, including the LDCs, SIDS and Africa,] with:

(i) National adaptation planning;

(ii) The identification of gaps in capacity and knowledge in the light of projected impacts;

(iii) The development of strategies to address projected impacts.

45. *Establishes* a technical and knowledge platform under the Nairobi work programme on impacts, vulnerability and adaptation to climate change in order:

(a) To facilitate the dissemination and enhancement of climate change scenarios as well as methods and tools for assessing impacts and vulnerability, as well as information on adaptation benefits, practices and outcomes[, in line with Articles 4, paragraphs 1(g) and 5, of the Convention];

(b) To develop and strengthen global, regional, national and local capacities, as well as social capacities, to address adaptation concerns [and to use adaptation metrics];

(c) To promote, coordinate and strengthen adaptation knowledge platforms, centres and networks at all levels so as to fill adaptation knowledge gaps;

(d) To incorporate the sustainable management of ecosystems in adaptation planning and actions;

(e) To enhance understanding of the global and regional implications of adaptation actions, of interlinkages among local, national, regional and global adaptation actions, and of progress made in reducing vulnerability at all levels and in achieving the goals referred to in Article 2, paragraph 2, and Article 4, paragraph 1, of the Agreement;

46. *Requests* the Adaptation Committee to operationalize the technical and knowledge platform referred to in paragraph 45 above;

47. *[Decides* that the AC shall report annually to the CMA on priority areas of concern for regions;]

48. *Invites* all relevant United Nations agencies and international, regional and national financial institutions to provide information to Parties through the secretariat on how their [development assistance][climate finance] programmes [and finance] incorporate climate-proofing and climate resilience measures;

49. *Requests* Parties to strengthen regional cooperation on adaptation where appropriate and, where necessary, establish regional centres and networks, in particular in developing countries[, with support from developed country Parties as previously agreed to in decision 1/CP.16, paragraph 13].

50. [*Requests* the [SBI][SCF][AC and the LEG] to develop modalities and procedures to assist developing countries to assess their adaptation needs without placing an undue burden on them, through existing mechanisms under the Convention, and make recommendations for consideration and adoption by the CMA at its [X] session.]

51. [*Requests* the operating entities of the Financial Mechanism and developed country Parties to provide financial support for undertaking the adaptation needs assessment referred to in paragraph 50 above.]

52. [*Requests* the [SBI][SCF][AC and the LEG] to develop methodologies, and make recommendations for consideration and adoption by the COP at its [X] session, for:

    (a) Taking the steps necessary to ensure that the level of support meets the needs for adaptation in developing countries in the context of the limit to global average temperature increase referred to in Article 2 of the Agreement;

    (b) Assessing the adequacy of support referred to in Article 4, paragraph 7(d), of the Agreement.]

53. [*Requests* the GCF to establish programmes for expedited support for the LDCs for the formulation of NAPs as defined in decisions 1/CP.16 and 5/CP.17, and the subsequent implementation of policies, projects and programmes identified by them.]

LOSS AND DAMAGE

54. *Invites* all Parties to reduce the risk of, and address, loss and damage associated with the adverse effects of climate change;

55. *Encourages* Parties to strengthen and, where appropriate, develop early warning systems and risk management plans for both extreme events and slow onset events;

56. *Agrees* to further develop and elaborate the work of the Warsaw International Mechanism, pursuant to relevant decisions of the COP, including the development of modalities and procedures for the mechanism's operation and support. This can involve, as appropriate, existing bodies and expert groups under the Convention, as well as relevant organizations and expert bodies outside the Convention, and be informed by relevant precedents in international law;

57. *Requests* the Executive Committee of the Warsaw International Mechanism to develop interim modalities and procedures, for review and adoption by the CMA at its [X] session, for the operation of the climate change displacement coordination facility referred to in Article 5, paragraph 3, of the Agreement, which shall:

    (a) Assist in developing arrangements for emergency relief;

    (b) Assist in providing organized migration and planned relocation;

58. *Also requests* the Executive Committee of the Warsaw International Mechanism to develop guidelines for a comprehensive approach to climate risk management;

59. *Decides* to:

    (a) Establish a clearing house for risk transfer in order to:

        (i) Provide a repository for information on insurance and risk transfer;

        (ii) Assist Parties in developing and implementing risk management strategies and finding the best insurance schemes;

        [(iii) Facilitate financial support for rehabilitation;]

    [(b) Establish a financial technical panel to explore approaches for:

        (i) Establishing regional and subregional pools to support regional and subregional risk transfer schemes;

        (ii) Providing support for microfinance initiatives;

        (iii) Exploring finance for slow onset events;]

60. *Requests* the Executive Committee of the Warsaw International Mechanism to initiate, at its next meeting, its work related to the operationalization of the provisions contained in paragraph 59 above, and to report on progress thereon to the CMA at its [X] session;

FINANCE

61. [*Recognizes* the importance of providing grant-based and highly concessional finance for adaptation to the poorest, most vulnerable developing countries;]

62. [*Decides* that, in the implementation of the Agreement, financial resources provided by developed country Parties and other Parties included in Annex II to the Convention to developing countries should enhance the implementation of their policies, strategies, regulations and action plans and their climate change actions with respect to both mitigation and adaptation to contribute to the achievement of the [objective][purpose] of the Agreement, meeting costs of adaptation, addressing loss and damage and including access to and transfer of

environmentally-sound technologies and capacity-building, based on the principles and in accordance with the provisions of the Convention;]

63. *[Decides* that the significant share of new multilateral funding for climate change actions should flow through the Financial Mechanism and the funds established under the Convention and its Kyoto Protocol;] *{Placement proposal: to be discussed under COP agenda item on long-term climate finance/in the Agreement}*

64. *[Decides* to establish a process for the consideration of new and [alternative][additional] sources of finance beyond existing bilateral and multilateral sources, in accordance with the terms of reference to be developed by the COP [at its twenty-second session], with a view to the COP taking a decision on this matter at its twenty-third session;]

65. *[Decides* to consider ways to enhance the effectiveness of climate finance;]

66. *[Decides* to support developing country Parties, including through the provision of financial resources, to determine and report on their financing needs and country programming priorities for the post-2020 period;]

67. *[Further decides* to establish a process to review the reports of developing countries in light of efforts to scale up financial support to developing countries in accordance with Article 11, paragraph 3(d), of the Agreement;]

68. [*Decides* that adequate, predictable and sustainable financial resources for the implementation of REDD-plus activities, including for results-based payments, shall be provided by Parties pursuing the coordination of support to, inter alia, public and private sources, including the Green Climate Fund in accordance with relevant decisions by the COP;]

69. **Option 1:**

[[*Decides* that in accordance with Article 6, paragraph 16, of the Agreement [and decision 3/CP.19][developed country] Parties [and other Parties included in Annex II to the Convention], shall communicate biennially on [the provision and mobilization of financial resources][their efforts] and include, inter alia, the following as appropriate:]

(a) [Information to increase clarity on the expected levels of climate finance mobilized from different sources;]

(b) Information on their policies, programmes and priorities;

(c) Information on actions and plans to mobilize additional finance

(d) [Information on actions to enhance enabling environments in order to mobilize and attract climate finance from a variety of sources;]

(e) Information on investment plans to implement nationally determined contributions, including financing needs to implement an enhanced level of ambition;

(f) [Information on efforts to integrate climate consideration including resilience into their international and domestic development strategies;

(g) Information on mobilization of domestic resources;

(h) Information on efforts to reduce international support for high emission and maladaptive investments]

(i) [Information on adequacy of the support provided];]

Option 2:

[*Decides* that the CMA shall facilitate the communication of the information referred to in Article 6, paragraph 16, of the Agreement, to improve transparency, consistency, comparability, completeness and accuracy, taking into account the periodic assessment by the Standing Committee on Finance;]

70. [*Also decides* to ensure that the provision of financial resources, development and transfer of technology and capacity-building for enhanced climate actions, including for loss and damage, shall be measured, reported and verified through modalities established under the Convention by the relevant subsidiary bodies of the Convention. Such modalities shall ensure that there shall be no double counting of financial resources provided and ensuring the environmental integrity of this agreement;]

71. [*Further decides* that measurement, reporting and verification of financial resources, including for meeting costs of adaptation, transfer of technology and capacity-building shall be provided in accordance with Article 4, paragraphs 3, 4 and 5, 8, and 9, in implementation of Article 4, paragraph 7 of the Convention, as well as financing provided through the Warsaw Mechanism for Loss and Damage;]

72. [*Decides* that, when accounting for financial resources provided and mobilized through public interventions, developed country Parties and other developed Parties included in Annex II to the Convention shall ensure that:

(a) Such financial resources accounted for specifically target climate adaptation, mitigation and cross-cutting activities as their main objective in line with the criteria from the IPCC;

(b) Any uncertainty is to be overcome following the principle of conservativeness, where it is preferable that financial resources are under reported rather than over reported;

(c) Where multiple actors are involved, the resulting financial resources are only counted once;

(d) Mobilized private financial resources are only reported where there is a clear causal link with a public intervention and the activity would not have moved forward, or moved forward at scale, in the absence of the public intervention;

(e) Mobilized multilateral financial resources are adjusted so that only the share attributed to developed country Parties and other developed Parties included in Annex II to the Convention is accounted for;] *{Placement proposal: to be moved* to Article 9*}*

73. [*Also decides* that the guidelines as per Article 6, paragraph 18, of the Agreement shall be developed in accordance with the provisions of the Convention and relevant decisions of the COP mutatis mutandis under the Agreement, and will be part of the common framework for transparency of action and support under Article 9 of this Agreement;]

74. [*Further decides* that the existing operating entities of the Financial Mechanism the Green Climate Fund and the Global Environment Facility shall serve this Agreement. [The Special Climate Change Fund, the Least-Developed Countries Fund and the Adaptation Fund will also serve the Agreement. Other funds may be established under this agreement.] The CMA has the authority to modify this list. [The operation of the Financial Mechanism shall remain open to be entrusted to other existing international entities.]]

75. [*Decides* that the CMA shall provide guidance on the policies, programme priorities, and eligibility criteria for the financial mechanism of this Agreement.] [The COP shall forward the guidance by the CMA to the operating entities in their entirety;]

76. [*Also decides* that a developing country Party in need of support is eligible to receive support from the operating entities of the Financial Mechanism, if it has communicated an NDMC under Article 3 of the Agreement and has submitted timely reports under Article 9 of the Agreement;]

77. *Further decides* that the Standing Committee on Finance shall serve the Agreement in line with its functions and responsibilities established under the COP;

TECHNOLOGY DEVELOPMENT AND TRANSFER

78. *[Decides* to strengthen the technology needs assessment (TNA) process, taking into account existing efforts, including under the Poznan strategic programme on technology transfer, by enhancing:

(a) The implementation of the results of the TNA process through, inter alia, technology action plans and project proposals;

(b) [The alignment of TNAs more closely with bankable finance projects and] improving TNAs to result in implementable projects;

(c) The synergy between the TNA process and other arrangements related to the implementation of mitigation and adaption actions, as appropriate;

(d) The operationalization of decision 18/CP.20 in the TNA process towards achieving gender-responsive climate policy in all relevant activities under the Convention;]*

** This paragraph will be finalized in the light of any relevant decision of COP 21 on strengthening the TNA process.*

79. *[Requests* the Technology Executive Committee (TEC) to elaborate the means of strengthening the TNA process referred to in paragraph 78 above, taking into account ongoing work relating to this matter, for consideration and adoption by the COP at its twenty-third session;]

80. *Decides* to strengthen the Technology Mechanism and requests the TEC and the Climate Technology Centre and Network (CTCN) to support the implementation of the Agreement[, including by strengthening their work relating to, inter alia, technology research, development and demonstration];

81. **Option 1:** *[Encourages]* [Parties][Developed country Parties][Parties included in Annex X to the Agreement] [to][shall][should] take steps to [improve enabling environments] [and address barriers] for technology development and transfer by:

(a) **Option (a):** Establishing and strengthening policy frameworks, institutions and the capacity to build country ownership and innovation, integrating a gender perspective and involving and strengthening the potential of citizens and communities;

Option (b): Arrangements shall be established to address intellectual property rights (IPRs), such as collaborative research and development, shareware, commitments related to humanitarian or preferential licensing, fully paid-up or joint licensing schemes, preferential rates and patent pools;

(b) [Leveraging and attracting private-sector investments and promoting access to [public-sector technology][technology in the public domain];]

(c) Strengthening the development and enhancement of endogenous capacities and technologies;

(d) In accordance with Article 4, paragraph 5, of the Convention, developed country Parties shall provide financial resources to address barriers created by IPRs and facilitate access to and the deployment of technology, including, inter alia, by utilizing the Financial Mechanism and/or establishing a funding window under the GCF to meet the full costs of IPRs of environmentally sound technologies and know-how, and such technologies will be provided to developing country Parties free of charge in order to enhance their actions to address climate change;

Option 2: [Developed country Parties][Parties included in Annex X to the Agreement] [shall][should][other] undertake steps to address barriers to accessing technology [and know-how] and to:

(a) Establish and strengthen their necessary policy frameworks in order to facilitate the removal of barriers and enable and accelerate technology development and transfer to [developing country Parties][Parties not included in Annex X to the Agreement];

(b) [Leverage enhanced support from the private sector for technology development and transfer to [developing country Parties][Parties not included in Annex X to the Agreement]] [Promote access to public-sector technology and promote technology development and transfer to developing country Parties];

(c) Provide financial and human resources and institutional and technical support for technology development and transfer to[, and for the development and enhancement of endogenous capacities and technologies of] [developing country Parties][Parties not included in Annex X to the Agreement];

82. **Option 1:** *Requests* the [APA] to develop recommendations regarding the technology framework referred to in Article 7, paragraph 3, of the Agreement, for consideration and adoption by the [CMA] at its first session, taking into account the need to avoid duplication and the opportunity to create synergies; the [APA] should consider, inter alia, the relationship between that framework and the framework for meaningful and effective actions [to enhance the implementation of Article 4, paragraph 5, of the Convention,] as well as the functions of the former and its linkage to the Technology Mechanism;

Option 2: *[Decides that* the SBI review the Technology Framework [Technology Mechanism under the framework] with a view to strengthening it, taking into consideration that the framework shall, inter alia] [Requests the [APA][SBI][SBSTA][others] to elaborate on the technology framework established under Article 7, paragraph 3, of the Agreement, taking into consideration that it shall, inter alia]:

(a) Facilitate the undertaking and updating of TNAs in developing country Parties;

(b) Facilitate various options for enabling developing countries' access to technologies;

(c) Facilitate the [undertaking of technology assessments][conducting of regular assessments [on][of] technologies that are ready for transfer];

(d) Make the list of ready-to-transfer technologies;

(e) Set the target for supporting the development and transfer of each technology to developing countries[and urging Parties to communicate to the secretariat in their INDC on the provision of the technology in a manner that facilitates clarity and understanding of the provision of support] [and anchoring dedicated nodal research, development and demonstration facility on technology development and transfer];

(f) [Mobilize resources to deliver the support] [[Facilitate] enhance financing and technical support for the implementation of the outcomes of the TNAs of developing countries];

(g) Address barriers to and create appropriate enabling environments for technology development and transfer;

Option 3: *Requests* the SBs to elaborate upon the technology framework referred to in Article 7, paragraph 3, of the Agreement.

83. *Decides* that the TEC and the CTCN shall report to the CMA, through the subsidiary bodies, on their activities to support the implementation of the Agreement;

84. *Also decides* to undertake a periodic assessment of the effectiveness of and the adequacy of the support provided to the Technology Mechanism in supporting the implementation of the Agreement on matters relating to technology development and transfer;

85. *Requests* the SBI to elaborate the scope and modalities of the periodic assessment referred to in paragraph 84 above, taking into account the review procedures of the CTCN as stipulated in annex VII to decision 2/CP.17 and the modalities for the stocktaking referred to in Article 10, paragraph 1, of the Agreement, for consideration and adoption by the COP at its [xx] session;

CAPACITY-BUILDING

Option 1: (*paragraph 86*)

86. *Requests* the SBI to act on the outcome of the third review of the Framework for capacity-building in developing countries , including ensuring appropriate institutional arrangements related to the implementation of Article [8] of the [Agreement], and to submit a proposal for consideration by the COP at its twenty-second session;

Option 2: (*paragraphs 86-94*)

86. *Decides* to launch the Paris Work Programme on Capacity-Building (PWPCB) from 2016 to 2019 [under the capacity-building committee hereby established] with the aim of addressing gaps and needs, both current and emerging, in implementing capacity-building in developing country Parties and further enhancing capacity-building efforts including coherence and coordination in capacity-building activities under the Convention by:

(a) Assessing how to increase synergies of cooperation and avoid duplication between existing bodies established under the Convention that implement capacity-building activities, including collaborating with institutions under and outside the Convention;

(b) Identifying capacity gaps and needs and recommending ways to fill these gaps, including through increased and more targeted climate finance, taking into account the results of in-depth analysis of country needs and challenges for capacity-building;

(c) Promoting the development and dissemination of tools and methodologies for the implementation of capacity-building;

(d) Fostering global, regional, national and subnational cooperation;

(e) Identifying and collecting good practices, challenges, experiences, and lessons learned in work on capacity-building by bodies established under the Convention;

(f) Exploring how developing countries can take ownership of building and maintaining capacity over time and space;

(g) Identifying opportunities to strengthen capacity at the national, regional, and subnational level;

(h) Fostering dialogue, coordination, collaboration and coherence among relevant processes and initiatives under the Convention, including through exchanging information on capacity-building activities and strategies of bodies established under the Convention;

(i) Providing guidance to the secretariat on the maintenance and further development of the web-based Capacity-Building Portal;

87. *Decides* that the [PWPCB][capacity-building committee] will annually focus on an area or theme for enhanced technical exchange on capacity-building, with the purpose of maintaining up-to-date knowledge on the successes and challenges of building capacity effectively in a particular area; [for example in 2016, capacity-building for reporting; in 2017, capacity-building for adaptation actions, etc.];

88. *Requests* the SBI to organize an annual in-session meeting of the [PWPCB][capacity-building committee] for four years, beginning in 2016;

89. *Requests* relevant bodies established under the Convention to nominate two members to participate in the meetings of the [PWPCB][capacity-building committee], as appropriate;

90. *Decides* that the [PWPCB][capacity-building committee] will commission a survey with questions addressed to operating entities, bodies established under the Convention and other relevant organizations outside the Convention to identify institutional gaps and additional linkages or alignment that can be achieved;

91. *Decides* that the inputs to the [PWPCB][capacity-building committee] will include, inter alia, submissions, the outcome of the third comprehensive review of the implementation of the Capacity-Building Framework, the secretariat's annual synthesis report on the implementation of the framework for capacity-building in developing countries, and the secretariat's compilation and synthesis report on capacity-building work of bodies established under the Convention and its Kyoto Protocol;

92. *Requests* the secretariat to submit annual technical progress reports on the work of the [PWPCB][capacity-building committee] to the SBI for its consideration at the sessions of the SBI that are held in conjunction with sessions of the COP;

93. *Decides* that the [PWPCB][capacity-building committee] will complete its work by SBI 50 (December 2019), with a view to providing recommendations to the SBI at the same session;

94. *Invites* the CMA, at its first session, to:

(a) Review the efficiency and effectiveness of the [PWPCB][capacity-building committee];

(b) Consider the recommendations of the SBI, as it seeks to enhance capacity-building activities under the Agreement;

(c) [Establish the capacity-building mechanism pursuant to Article 8, paragraph 5, of the Agreement;]

Option 1: *(paragraph 95)*

95. *Requests* the [IPC] [SBI] to prepare a recommendation for the CMA on the enhancement and intensification of the work of the institutional arrangements on capacity-building;

Option 2: *(paragraph 95)*

95. *Requests* the [IPC] [SBI] to develop modalities and procedures for the capacity-building mechanism established by Article 8, paragraph 5, of the Agreement;

Option 3: (*paragraphs 95 and 95bis*) {International Mechanism for Capacity Building under the Convention and the Agreement}

95. The International Mechanism for Capacity-Building is the institutional arrangement for capacity-building under the Convention, the Kyoto Protocol and the Agreement and constitutes the Durban Forum, the capacity-building portal and the proposed Capacity-building Coordination Committee (proposed in decision X/CP.21). The mechanism is established under the Capacity Building Frameworks (decisions 2/CP.7 and 3/CP.7) to address capacity-building needs and gaps in developing countries and countries with economies in transition as they implement the Convention, the Kyoto Protocol and the Agreement;

95bis. In fulfilling its role in a comprehensive, integrated and coherent manner, the International Mechanism for Capacity-Building shall:

(a) Enhance knowledge on and understanding of technical and management approaches to addressing capacity-building needs and gaps in developing countries and countries with economies in transition by facilitating and promoting: (a) action to address gaps in the understanding of and expertise on approaches to addressing capacity-building associated with the implementation of the Convention, its Kyoto Protocol and the Agreement; (b) the collection, sharing, management and utilization of relevant data and information; and (c) the translation into implementable actions of the synthesis of best practices, challenges, experiences and lessons learned drawn and developed by the secretariat from the Durban Forum and any data and information from the Capacity-Building Portal;

(b) Strengthen dialogue, coordination, coherence and synergies among relevant stakeholders;

(c) Provide leadership and coordination and, as and where appropriate, oversight of the assessment and implementation of approaches to addressing capacity-building needs and gaps in developing countries and countries with economies in transition associated with the implementation of the Convention, its Kyoto Protocol and the Agreement;

(d) Foster dialogue, coordination, coherence and synergies among all relevant stakeholders, institutions, bodies, processes and initiatives outside of the Convention, with a view to promoting cooperation and collaboration across relevant work and activities at the subnational, national, regional and international levels;

(e) Enhance action and support, including in relation to adaptation, mitigation, finance and technology, to address capacity-building under the Convention, the Kyoto Protocol and the Agreement;

(f) Provide information and recommendations on addressing capacity-building implementation needs and gaps in developing countries and countries with economies in transition for consideration by the Conference of the Parties when providing relevant guidance to the Financial Mechanism of the Convention and its operating entities under the Convention, its Kyoto Protocol and the Agreement;

(g) Facilitate the mobilization and securing of expertise, and the enhancement of support, including in relation to adaptation, mitigation, finance and technology, to strengthen existing approaches and, where necessary, facilitate the development and implementation of additional approaches to addressing capacity-building under the Convention, its Kyoto Protocol and the Agreement;

(h) Strengthen, consolidate and enhance the sharing of relevant information, knowledge, experience and good practices, at the local, national, regional and international levels, taking into account, as appropriate, traditional knowledge and practices and gender-disaggregated data and information;

(i) Complement, draw upon the work of and involve, as appropriate, existing bodies and expert groups under the Convention, the Kyoto Protocol and the Agreement, as well as relevant organizations and expert bodies outside of the Convention, at the subnational, national and international levels;

(j) Promote synergies and strengthen engagement with subnational, national, regional and international organizations, centres and networks in order to enhance the implementation of capacity-building actions on mitigation, adaptation, technology and finance in developing countries and countries with economies in transition;

(k) Consider data and information communicated by countries and other partners on the monitoring and review of capacity-building at the subnational, national, regional and international levels in relation to mitigation, adaptation, technology transfer, support provided and received, possible needs and gaps and other relevant information;

(l) Assess and provide recommendations on further actions that may be required to lift constraints on and fill gaps in capacity-building at the subnational, national, regional and international levels, particularly in developing countries and countries with economies in transition.]

96. *Calls upon* all Parties to ensure that education, training and public awareness, as reflected in Article 6 of the Convention and in Article 8bis of the Agreement are adequately considered in their contribution to capacity building;

97. *Requests* the CMA to explore ways of enhancing the implementation of training, public awareness, public participation and public access to information so as to enhance actions under this Agreement, at its first session;

TRANSPARENCY OF ACTION AND SUPPORT

98. *Decides* to establish the Capacity-building Initiative for Transparency in order to build institutional and technical capacity, both pre- and post-2020. This initiative will support developing country Parties, upon request, in meeting [enhanced] transparency requirements as defined in Article 9[, paragraph 6,] of the Agreement in a timely manner.

99. *Also decides* that this initiative will aim:

(a) To strengthen national institutions for transparency-related activities in line with national priorities;

(b) To provide relevant tools, training and assistance for meeting the provisions stipulated in Article 9 of the Agreement;

(c) To assist in the improvement of transparency over time.

100. *Requests* the operating entities of the Financial Mechanism to support the establishment and operation of the Initiative. In particular, urges and requests the Global Environment Facility to make arrangements to support the establishment and operation of this Initiative as a priority reporting-related need, including through voluntary contributions to support developing countries in GEF-6 and future replenishment cycles, to complement existing support under the GEF.

101. *Also requests* the [APA][SBSTA] to develop recommendations for modalities, procedures and guidelines in accordance with Article 9, paragraph 8, of the Agreement, and to define the year of their first and subsequent review and update, as appropriate, at regular intervals, for consideration and adoption at the first session of the CMA/by the twenty-fourth session of the COP, taking into account, inter alia:

(a) The importance of facilitating improved reporting and transparency over time;

(b) The need to avoid undue burden and duplication;

(c) The need to ensure that there is no backsliding;

(d) The need to ensure that there is no double counting;

(e) The need to ensure environmental integrity.

102. *Further requests* the [APA][SBSTA], when developing modalities, procedures and guidelines in accordance with paragraph 101 above, to consider, inter alia:

(a) The application of technical corrections in the review of greenhouse gas inventories provided in accordance with Article 9, paragraph 4(a), of the Agreement;

(b) The types of flexibility to developing countries set out in Article 9, paragraph 2, of the Agreement including scope, frequency of reporting, level of detail, and the application of a grace period;

(c) The methodological consistency between the communication of nationally determined mitigation {insert the relevant phrase from outcome of Article 3.2} and their implementation;

(d) Explanations of key categories of emissions and removals excluded from nationally determined mitigation {insert the relevant phrase from outcome of Article 3.2} and strive to include them over time;

(e) That Parties, once a source, sink or activity is accounted for in a nationally determined mitigation {insert the relevant phrase from outcome of Article 3.2}, continue to include it or provide an explanation of why it has been excluded;

(f) That Parties use common metrics and methodologies adopted by the Intergovernmental Panel on Climate Change for the estimation of greenhouse gas emissions and removals;

(g) That internationally transferred mitigation outcomes used by any Party to meet its nationally determined mitigation {insert the relevant phrase from outcome of Article 3.2} are supplemental to domestic action;

(h) That Parties report on progress made in the implementation of their national adaptation plans to the secretariat every two years and collectively exchange information and share lessons learned in the implementation of adaptation, including at the SBSTA, and by promoting, coordinating and strengthening adaptation knowledge platforms, centres and networks;

(i) That Parties improve the methodologies used for reporting information on their adaptation undertakings, their assessment of climate change impacts, their quantification of and information on vulnerability, and their quantification of impacts, actions taken to build resilience and reduce vulnerability, and investments required, and for contributing information to the global stocktake, as set out in Article 10 of the Agreement;

(j) Support provided, enhancing delivery of support for both adaptation and mitigation through, inter alia, the common tabular formats for reporting support, and taking into account the SBSTA agenda item on methodologies for reporting on finance, domestic measurement and international verification, and enhancing the reporting by developing countries on support received, including the use, impact and estimated results thereof;

(k) Enhanced domestic monitoring, reporting and verification systems for action and support;

(l) Developing an international system of accounting designed to avoid double or multiple counting of support across countries and donors;

(m) Information to enable the tracking of progress against the aggregate goal for finance, set out in Article 6, paragraph 10, of the Agreement, the global stocktake set out in Article 10 of the Agreement, and the broader transformation of financial flows;

(n) Drawing on the biennial assessments and other reports by the SCF and other relevant bodies under the Convention;

(o) Enhancing the clarity and tracking of progress on the financial resources provided and mobilized by developed country Parties and other developed Parties included in Annex II to the Convention, both at the individual and collective levels;

(p) Enhanced reporting on the negative social and economic impact of response measures.

{This section requires adjustments to align with outcomes from other relevant Articles}

103. *Decides* to continue and to further strengthen the mandate of multilateral assessment for the provision of financial resources, technology development and transfer, and capacity-building to developing countries Parties during the international assessment and review process for those Parties, in order to ensure that commitments and the provision of such support by developed country Parties and other developed Parties included in Annex II to the Convention are implemented, verified through a robust verification system and meet the needs expressed and identified by developing country Parties, recalling the mandate contained in decision 2/CP.17, paragraph 26, on revising the modalities and procedures for international assessment and review no later than 2016;

104. *Also decides* that developed country Parties and other developed Parties included in Annex II to the Convention shall report on the provision of financial resources, technology development and transfer, and capacity-building to developing countries, in line with the common methodologies adopted by the COP as mandated by decision 2/CP.17, paragraph 19;

105. *Requests* that the progress of work under the work programme referred to in paragraph 9 above be reported to future sessions of the Conference of the Parties and that this work be concluded no later than 2018;

106. *Decides* that Parties' first biennial communications shall be submitted in 2022;

107. *Also decides* that the review of reporting shall commence three months after the submission of the biennial communications;

108. *Further decides* that the measurement, reporting and verification system established by decisions 1/CP.16 and 2/CP.17 shall be superseded by the common system of transparency of action and support, immediately following the submission of the final biennial reports and biennial update reports.

GLOBAL STOCKTAKE

109. **Option 1:** *Decides* that a comprehensive assessment resulting from the global stocktake referred to in Article 10 of the Agreement shall take into account, inter alia:

(a) An updated aggregate synthesis report on the [overall] [collective] effect of the nationally determined contributions communicated by Parties;

(b) [The [overall] [collective] effect of the nationally determined contributions communicated by Parties for subsequent commitment periods;]

(c) The state of adaptation efforts, experiences and priorities, including information from national adaptation plans;

(d) The mobilization and provision of means of implementation and support;

(e) The latest reports of the IPCC;

(f) [The [overall] [collective] effect of NDC as informed by the aggregated output of the collective monitoring, reporting and verification process under Article 9 of the Agreement, including from national communications and biennial assessment of the SCF];

(g) Relevant inputs from [the 2013–2015 review and] the technical examination process as referred to in decision 1/CP.20, paragraph 19 [of opportunities to enhance practical action];

(h) Relevant existing mechanisms of the Convention;

(i) Input from relevant international organizations, non-state actors and international cooperative initiatives;

(j) Other inputs identified by the CMA.

Option 2: *Requests* the [body] to identify the sources of input for the global stocktake referred to in Article 10 of the Agreement and to report to the CMA, for consideration and adoption at its first session;

110. *Requests* the SBSTA to provide advice on how the assessments of the Intergovernmental Panel on Climate Change can inform the stocktaking of the implementation of the Agreement pursuant to its Article 10 and to report to the [body] on this matter at its first session;

111. *Requests* the [body] to develop modalities for the global stocktake referred to in Article 10 of the Agreement and to report to the CMA, for consideration and adoption at its first session;

FACILITATING IMPLEMENTATION AND COMPLIANCE

[112. *Requests* the [APO] to develop the modalities and procedures for the effective operation of the [mechanism][committee][International Climate Justice Tribunal] referred to in Article 11 of the Agreement, with a view to the APO completing its work on this matter for consideration and adoption by the CMA at its first session. [These modalities and procedures shall, inter alia, set out the structure of the [mechanism][committee] and the range of actions to be taken by the [mechanism][committee] to carry out its functions[, taking into account the transparency framework referred to in Article 9 of the Agreement].]]

IV. [WORKSTREAM 2]

[[A. Preamble]

The Conference of the Parties,

Pp1 *Recalling* Articles 2, 3 and 4 of the Convention,

Pp2 *Also recalling* decisions, 1/CP.17, 2/CP.18, 1/CP.19 and 1/CP.20,

Pp3 *Emphasizing* with serious concern the urgent need to address the significant gap between the aggregate effect of Parties' mitigation pledges global annual emissions of greenhouse gases by 2020 [and aggregate emission pathways] consistent with having a likely chance of keeping the increase in global average temperature below 2 °C [or 1.5 °C] above pre-industrial levels,

Pp4 *Stressing* the urgency of accelerating the implementation of the Convention and its Kyoto Protocol in order to enhance pre-2020 ambition,

Pp5 *Recognizing* the urgent need to enhance the provision of finance, technology and capacity-building support by developed country Parties, in a predictable manner, to enable enhanced pre-2020 action by developing country Parties,

Pp6 *Emphasizing* that enhanced pre-2020 ambition can lay a solid foundation for enhanced post-2020 ambition,

Pp7 *Also emphasizing* the enduring benefits of ambitious and early action, including major reductions in the cost of future mitigation and adaptation efforts,

Pp8 *Agreeing* to uphold and promote regional and international cooperation in order to mobilize stronger and more ambitious climate action by all Parties and non-Party stakeholders, including civil society, the private sector, financial institutions, cities and other subnational authorities, local communities and indigenous peoples,

[B. Mitigation]

113. *Resolves* to ensure the highest possible mitigation efforts in the pre-2020 period, including by:

(a) Urging all Parties to the Kyoto Protocol that have not already done so to ratify and implement the Doha Amendment to the Kyoto Protocol;

(b) Urging all Parties that have not already done so to make and implement a mitigation pledge under the Cancun Agreements;

(c) Reiterating its resolve, as set out in decision 1/CP.19, paragraphs 3 and 4, to accelerate the full implementation of the decisions constituting the agreed outcome pursuant to decision 1/CP.13 and enhance ambition in the pre-2020 period in order to ensure the highest possible mitigation efforts by all Parties under the Convention;

(d) Inviting developing country Parties that have not submitted their first biennial update reports to do so as soon as possible;

(e) Urging all Parties to participate in the existing measurement, reporting and verification processes under the Cancun Agreements, in a timely manner, with a view to demonstrating progress made in the implementation of their mitigation actions, and urging those Parties with pledges under the Cancun Agreements to do so with a view to demonstrating the full implementation of their pledges;

114. *Encourages* Parties to promote to Party and non-Party stakeholders the voluntary cancellation, without double counting, of units, including certified emission reductions issued under the Kyoto Protocol that are valid for the second commitment period;

115. [*Urges* host and purchasing Parties to report transparently on internationally transferred mitigation outcomes, including those outcomes used to meet international pledges, and emission units issued under the Kyoto Protocol with a view to promoting environmental integrity and avoiding double counting;]

116. *Recognizes* the social, economic and environmental value of voluntary mitigation actions and their co-benefits for adaptation, health and sustainable development;

117. *Resolves* to strengthen, in the period 2016–2020, the existing technical examination process on mitigation as defined in decision 1/CP.19, paragraph 5(a) and decision 1/CP.20, paragraph 19, taking into account the latest scientific knowledge, including by:

(a) Encouraging Parties, Convention bodies, international organizations and non-Party stakeholders to engage in this process, to share their experiences and suggestions, including from regional events, and to cooperate in facilitating the implementation of policies, practices and actions identified during this process in accordance with national sustainable development priorities;

(b) Striving to improve, in consultation with Parties, access to, and participation in, this process of developing country Party and non-Party experts;

(c) Requesting the Technology Executive Committee and the Climate Technology Centre and Network in accordance with their respective mandates:

(i) To engage in the technical expert meetings and enhance their efforts to facilitate and support Parties in scaling up the implementation of policies, practices and actions identified during this process;

(ii) To provide regular updates during the technical expert meetings on the progress made in facilitating the implementation of policies, practices and actions previously identified during this process;

(iii) To include information on their activities under this paragraph in their joint annual report to the Conference of the Parties;

(d) Encouraging Parties to make effective use of the Climate Technology Centre and Network to obtain assistance to develop economically, environmentally and socially viable project proposals in the high mitigation potential areas identified in this process;

118. *Encourages* the operating entities of the Financial Mechanism of the Convention to engage in the technical expert meetings and to inform participants on their contribution in facilitating progress in the implementation of policies, practices and actions identified during the technical examination process;

119. *Requests* the secretariat to organize the process referred to in paragraph 117 above and disseminate its results, including by:

(a) Organizing, in consultation with the Technology Executive Committee and relevant expert organizations, regular technical expert meetings focusing on specific policies, practices and actions representing best practice and with the potential to be scalable and replicable;

(b) Updating, on an annual basis, following the meetings referred to in paragraph 119(a) above and in time to serve as input to the summary for policymakers referred to in paragraph 119(c) below, a technical paper on the mitigation benefits and co-benefits of policies, practices and actions to enhance mitigation ambition, as well as on options to support the implementation of these, information on which should be made available in a user-friendly online format;

(c) Preparing, in consultation with the champions referred to in paragraph 130 below, a summary for policymakers, with information on specific policies, practices and actions representing best practice and with the potential to be scalable and replicable, and on options to support the implementation of these, as well as on relevant collaborative initiatives, and publishing the summary at least two months in advance of each session of the Conference of the Parties as input for the high-level event referred to in paragraph 129 below;

120. *Decides* that the process referred to in paragraph 117 above should be organized jointly by the Subsidiary Body for Implementation and the Subsidiary Body for Scientific and Technological Advice and take place on an ongoing basis until 2020;

121. *Also decides* to conduct, in 2017, an assessment of the process referred to in paragraph 117 above, so as to improve its effectiveness;

[C. Support]

122. *Resolves* to enhance the provision of urgent and adequate finance, technology and capacity-building by developed country Parties in order to enhance the level of ambition of pre-2020 action by Parties, and in this regard *strongly urges* developed country Parties to scale up their level of financial support, with a concrete roadmap to achieve the goal of jointly providing USD 100 billion annually by 2020 for mitigation and adaptation, and significantly increasing adaptation finance from current levels and to further provide appropriate transfer of technology and capacity-building;

122Alt. *Reiterates* its resolve as set out in decision 1/CP.19, paragraphs 2, 3 and 4(e), and in decision 1/CP.20, paragraph 18, to accelerate the full implementation of the decisions constituting the agreed outcome pursuant to decision 1/CP.13, in particular in relation to the provision of means of implementation including technology, finance and capacity-building to developing country Parties, recognizing that such implementation will enhance ambition in the pre-2020 period;

[D. Accelerated implementation]

[Option 1: *(paragraph 123-123ter)*

123. *Decides* to launch an accelerated implementation process starting in 2016 and continuing until 2020, to give effect to decision 1/CP.19, paragraphs 3 and 4, inter alia, by:

(a) Assessing the progress of the implementation of decision 1/CP.19, paragraph 4;

(b) [Reviewing and] assessing the adequacy of financial, technological and capacity-building support to enable increased mitigation and adaptation ambition by developing country Parties in accordance with decision 1/CP.19, paragraphs 3, 4(e) and 4(f);

(c) Developing and implementing measures to identify and address the adaptation and means of implementation gaps in the pre-2020 period;

(d) Developing ways and means to address the implementation gaps identified in the paragraph 123(c) above in accordance with the principles and provisions of the Convention;

(e) Sharing experiences, assessing the adequacy and addressing economic diversification as well as the adverse social and economic impacts of response measures on developing country Parties;

123bis. *Requests* the secretariat to organize the process referred to in paragraph 123 above and disseminate its results;

123ter. *Decides* that the process referred to in paragraph 123 above should be conducted under the Subsidiary Body for Implementation and take place annually until 2020;

Option 2: *(paragraph 123)*

123. *Decides* to conduct a facilitative dialogue in conjunction with the twenty-third session of the Conference of the Parties (November 2017) with a view to identifying ways to enhance the ambition of mitigation efforts by all Parties, including identifying relevant opportunities to enhance the provision and mobilization of support and enabling environments;]

[E. Non-Party stakeholder engagement]

124. *Acknowledges* with appreciation the results of the Lima-Paris Action Agenda, which build on the climate summit convened on 23 September 2014 by the United Nations Secretary-General;

125. *Welcomes* the efforts of non-Party stakeholders to scale up their climate actions, including those registered in the Non-State Actor Zone for Climate Action (NAZCA) platform;

126. *Invites* non-Party stakeholders to demonstrate their climate actions through mechanisms such as the NAZCA platform;

127. *Encourages* Parties to work closely with non-Party stakeholders to catalyse efforts to strengthen mitigation and adaptation action;

128. *Also encourages* non-Party stakeholders to increase their engagement in the processes referred to in paragraphs 117 above and 131 below;

[F. High-level dialogue/events]

129. *Agrees* to convene, in furtherance of decision 1/CP.20 paragraph 21, building on the Lima-Paris Action Agenda and in conjunction with each session of the Conference of the Parties from 2016 to 2020, a high-level event that:

(a) Further strengthens high-level engagement on the implementation of policy options and actions arising from the processes referred to in paragraph 117 above, building on the summary for policymakers referred to in paragraph 119(c) above;

(b) Provides an opportunity for announcing new or strengthened efforts, voluntary initiatives and coalitions, including implementation of policies, practices and actions arising from the processes referred to in paragraph 117 above and presented in the summary for policymakers referred to in paragraph 119(c) above;

(c) Takes stock of related progress and recognizes new or strengthened efforts, voluntary initiatives and coalitions;

(d) Facilitates the exchange of experiences and sharing of best practices on climate action by non-Party stakeholders, including by providing a platform to strengthen indigenous peoples' knowledge, practices and technologies on mitigation and adaptation in a holistic and integrated manner;

(e) Provides meaningful and regular opportunities for the effective engagement of high-level dignitaries from Parties, international organizations, international cooperative initiatives and non-Party stakeholders;

130. *Decides* that two high-level champions shall be appointed to facilitate, through strengthened high-level engagement in the 2016–2020 period, the successful execution of existing efforts and the scaling-up and launching of new or strengthened efforts, voluntary initiatives and coalitions, including by:

(a) Working with the Executive Secretary and the current and incoming presidents of the Conference of the Parties to coordinate the annual high-level event referred to in paragraph 129 above;

(b) Engaging with interested Parties and non-Party stakeholders, including to further the voluntary initiatives of the Lima-Paris Action Agenda;

(c) Providing guidance to the secretariat on the organization of technical expert meetings referred to in paragraph 119(a) above;

131. *Also decides* that the high-level champions referred to in paragraph 130 above should serve for a term of two years, with their terms overlapping for a full year to ensure continuity, such that:

(a) The President of the twenty-first session of the Conference of the Parties should appoint one champion, who should serve from the date of the appointment until the last day of the twenty-second session of the Conference of the Parties (November 2016);

(b) The President of the twenty-second session of the Conference of the Parties should appoint one champion, who should serve from the date of the appointment until the last day of the twenty-third session of the Conference of the Parties;

(c) Thereafter, each subsequent President should appoint one champion who should serve for two years and succeed the previously appointed champion whose two-year term has ended;

132. *Invites* all interested Parties and relevant organizations to provide support for the work of the champions referred to in paragraph 130 above;

[G. Adaptation]

133. *Decides* to launch an [enhanced] technical examination [process] of adaptation action [under the Subsidiary Body for Implementation and the Adaptation Committee, in collaboration with the SBSTA], and in consultation with relevant bodies, including, inter alia, the Least Developed Countries Expert Group, the Standing Committee on Finance, the Consultative Group of Experts on National Communications from Parties not included in Annex

I to the Convention, the Climate Technology Centre and Network and the Technology Executive Committee, and with consideration of activities under the Nairobi work programme;

134. *Also decides* that such [enhanced] technical examination [process] of adaptation action will endeavour to identify opportunities for strengthening resilience, reducing vulnerabilities and increasing the understanding and implementation of adaptation actions;

135. *Further decides* to launch an [enhanced] technical examination [process] of adaptation action [under the Subsidiary Body for Implementation and the Adaptation Committee, in collaboration with the SBSTA], and in consultation with relevant bodies, including, inter alia, the Least Developed Countries Expert Group, the Standing Committee on Finance, the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention, the Climate Technology Centre and Network and the Technology Executive Committee, and with consideration of activities under the Nairobi work programme;

136. *Decides* that [the SBI and the Adaptation Committee, in collaboration with the SBSTA], and with the support of the secretariat, will engage with and explore ways to take into account, synergize with and build on the existing arrangements for adaptation-related work programmes, bodies and institutions under the Convention, ensuring that value is added to existing activities and avoiding any duplication of work;

137. *Also decides* that such [enhanced] technical examination [process] of adaptation action will be pursued trough:

(a) Facilitating the sharing of good practices, experiences and lessons learned;

(b) Identifying actions that could significantly enhance the implementation of adaptation action including those actions which could enhance economic diversification and have mitigation co-benefits;

(c) Examining gaps relating to institutions, knowledge, technology development and transfer, capacity and finance;

(d) Promoting cooperative action on adaptation;

(e) Developing modalities and procedures to assist developing countries to assess their adaptation needs without placing an undue burden on them, taking into account the urgent needs of those developing countries that are particularly vulnerable;

(f) Identifying options to strengthen enabling environments and enhance the provision of support for adaptation, including finance, technology development and transfer and capacity-building;

138. *Further decides* that the [enhanced] technical examination [process] of adaptation action will take into account the process, modalities, outputs and outcomes, as well as the lessons learned from the technical examination process on mitigation referred to in paragraph 117 above;

139. *Requests* [the secretariat] to facilitate the [enhanced] technical examination [process] of adaptation action by:

(a) Organizing regular technical expert meetings focusing on policies, strategies and actions;

(b) Preparing a yearly synthesis report on the progress of the enhanced technical examination of adaptation action;

(c) Preparing regularly and in time to serve as input to the summary for policymakers referred to in paragraph 139(d) below, a technical paper on opportunities to enhance adaptation action [and support, including gaps in means of implementation];

(d) Preparing a summary for policymakers and publishing it well in advance of [each] session of the Conference of the Parties;

140. *Invites* the President of the Conference of the Parties to convene, in conjunction with each session of the Conference of the Parties, a high-level event aimed at further strengthening high-level engagement on adaptation;

141. *Decides* to conduct, in [2017], an assessment of the [enhanced] technical examination [process] of adaptation action with the aim of improving its effectiveness and determining the arrangements for its continuation or reinforcement, as appropriate;

V. NON-PARTY STAKEHOLDERS

142. *Welcomes* the efforts of all actors to address and respond to climate change, including those of civil society, the private sector, financial institutions, cities and other subnational authorities;

143. *Invites* the actors referred to in paragraph 142 above to scale up their efforts and support actions to reduce emissions and/or to build resilience and decrease vulnerability to the adverse effects of climate change;

144. *[Also invites* the actors referred to in paragraph 142 above to demonstrate their continued efforts to address climate change via the Non-State Actor Zone for Climate Action;[21]]

145. *Recognizes* the knowledge, technologies, practices and efforts made by local communities and indigenous peoples to address and respond to climate change;

VI. ADMINISTRATIVE AND BUDGETARY MATTERS

146. *Notes* the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in this decision and requests that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources;

147. *Takes note* of the requirement for additional resources for the implementation of the relevant actions referred to in this decision;

148. *Emphasizes* the urgency of making additional resources available for the implementation of the relevant actions, including the actions referred to in this decision, and the implementation of the work programme referred to in paragraphs 9 above;

149. *Urges* Parties to make voluntary contributions for the timely implementation of this decision, noting the estimated budget requirement for 2016 of USD [X];

150. *Requests* the Executive Secretary to provide an estimate of the budgetary implications of the actions requested in this decision to be undertaken in 2017 for consideration by the SBI at its forty-fourth session, with a view to the SBI making a recommendation thereon to the COP at its twenty-second session.**]**

[21] Available at <http://climateaction.unfccc. int>.

Annex II

[English only]

Reflections note

This note reflects the textual suggestions made during the discussions of the Contact Group on 4 December 2015 from 15:00 to 18:00 in the form of a tabular summary.[22]

Draft Agreement

Provision	Suggested changes
	Preamble
Pp2	Insert “and provisions” after “principles”
Pp5	Insert “African countries”
Pp6	Insert “Central American isthmus”
Pp6	Insert “small mountainous developing States”
Pp6	Insert “African countries”
Pp9	Insert “sustainable lifestyles and sustainable patterns of consumption and production”
Pp10	Insert “climate change induced displaced people”
	Article 1 (Definitions)
Art. 1	Include reference with regard to developing country Parties, including countries with economies in transition (as in footnote 6)
	Article 2 (Purpose)
Art. 2	Bracket entire Article
Art. 2.1	Bracket “In order to strengthen the global response to the threat of climate change, Parties agree to take urgent action and enhance cooperation and support”
Art. 2.1	Insert “in accordance with equity and common but differentiated responsibilities”
Art. 2.1(c)	Bracket entire paragraph
Art. 2.1(c)	Bracket “that fosters climate resilient and low greenhouse gas emission societies and economies, and”
Art. 2.1(c)	Bracket “transformation” and insert “pathway” or “gradual shift”
Art. 2.2	Insert reference to Mother Earth
Art. 2.2	Insert “integrity and resilience of natural ecosystems”
Art. 2.2	Insert “rights of indigenous peoples”
Art. 2.2	Insert “just transition of the workforce and creation of decent work and quality jobs in accordance with nationally defined development priorities”
Art. 2.2	Bracket “shall”
Art. 2.2	Bracket “, and on the basis of respect for human rights and the promotion of gender equality [and the right of peoples under occupation]”
	Article 2 bis (General)
Art. 2 bis	Bracket entire paragraph
	Article 3 (Mitigation)
Art. 3.1	Insert closing bracket

[22] Note: Proposals to delete or to bracket text are reflected by using the term bracket.

Art. 3.1(b)	Add “[reliable science]” after “[best available science]”
Art. 3.1(d)	Add “[removal of greenhouse gases]” instead of “[decarbonization”]
Art. 3.5	Option for placement after Art. 3.2
Art. 3.5	Bring footnote 6 into the paragraph
Art. 3.7	Add “[Article 12 of the Convention, decision 1/CP.20 and]” after “in accordance with”
Art. 3.8	Bracket all paragraphs as implementation of footnote 1 and remove the no text option
Art. 3.9	Placement in decision Add option of first INDC automatically becoming the contribution under the Agreement[23]
Art. 3.10	Add the starting year for “successive” communication [2020][2021] Address common time frame after 2030 In option 1 replace “after” with “before” and “cycle” with “period”
Art 3.11	Bracket all paragraphs as implementation of footnote 1
Art 3.12	Option for placement in Art. 9 Transparency
Art. 3.14	Option for placement in Art. 9 Transparency In option 2 add opening square bracket
Art. 3.15	Option for placement in Art. 9 Transparency Add into [or REDD-plus] the following “[and the joint mitigation and adaptation approach for the integral and sustainable management of forests]”
Art. 3.16	Option for placement in the Preamble or Art. 2
Art. 3.17	Option for placement in the Preamble or Art. 2
Art. 3.18	Option for placement after Art. 22 as Art .22 bis. Noted that Parties are consulting on textual solutions.
Art. 3.19	Bracket all paragraphs as implementation of footnote 1
Art. 3.20	Add “[guided by the principles and provisions of the Convention, Article 2, paragraph 2, of the Kyoto Protocol and the COP]” after “International Maritime Organization” Bracket “,with a view to agreeing concrete measures addressing these emissions, including developing procedures for incorporating emissions from international aviation and marine bunker fuels into low-emission development strategies” Bracket all paragraphs as implementation of footnote 1
	Article 3 bis (REDD-plus)
Art. 3 bis	Option for placement after Art. 5 Bracket paragraphs 2 and 3
	Article 3ter (Mechanism to support sustainable development)
Art. 3 ter	Bracket all paragraphs as implementation of footnote 1
	Article 4 (Adaptation)
	Include reference to early warning systems
	Make reference to support clearer; that is, who provides support and to whom
Art. 4.1	Include concept of long-term vision
Art. 4.2	Include concept of long-term vision
Art. 4.3(b)	Include concept of “platform”
Art. 4.4	Bracket entire paragraph

[23] Note: This option is included in the decision text, paragraph 22.

Art. 4.5	Include “with a view to implement adaptation” Bracket “, with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions, where appropriate”
Art. 4.6	Bracket “international cooperation and”
Art. 4.7 chapeau	Bracket “shall” and “cooperation for enhancing”
Art. 4.7(b)	Bracket “including those” Include “for the implementation of action”
Art. 4.7(c)	Bracket (in order to allow for consultations with relevant research and systematic observation experts)
Art. 4.7(d)	Bracket “effectiveness”
Art. 4.7(e)	Bracket “, and challenges and gaps in a manner consistent with encouraging good practices”
Art. 4.7(f)	Bracket
Art. 4.8	Bracket
Art. 4.9 chapeau	Exchange for chapeau from compilation text (Art 4.9 chapeau)
Art. 4.9(d)	Include “efforts” at the end of the item
Art. 4.9(e)	Change to “Monitoring and evaluation and learning from national adaptation plans, policies, programmes and actions”
Art. 4.10	Exchange for text from compilation text (paras 7(a), 7(b) and 7 bis)
Art. 4.11 chapeau	Include language from compilation text to reflect the concept ‘’in a manner that does not create an additional burden on developing countries’’
Art. 4.11(b)	Exchange for text from compilation text (Art. 4.11(b))
Art. 4.13	Exchange for text from compilation text (Art. 4.12, option 2)
Art. 4.14	Include reference to Art. 10
	Article 5 (Loss and damage)
	Insert option 1 of the compilation Text as option 1
	Include reference to climate change induced displaced people
	Article 6 (Finance)
Art. 6.6	Concern about “result-based payments”
Art. 6.8	Missing reference to “[and other vulnerable countries]”; however, it was clarified that the reference was indeed contained in the relevant paragraph
Art. 6.9	Missing reference to an indemnization mechanism; however, it was clarified that the reference was indeed contained in the relevant paragraph
Art. 6.10 option 2	Missing reference to the concept of pathways and short-term collective quantified goals and an indication to provide textual proposals in this regard
Art. 6.11	Missing reference to the concept of scaled-up
Art. 6.18	Missing text around the development of guidelines pertaining to measurement, reporting and verification of support
	Article 7 (Technology development and transfer)
Art. 7.2	Add “socially and environmentally sound (technology)”
	Article 8 (Capacity-building)
Art. 8.1 to 8.5	Co-chair announced that corrections were made to the text
Full article	Reference to cross-cutting issues related to transparency
	Article 8 bis

	None
	Article 9 (Transparency)
Art. 3.14 and 3.15	Include a clear reference to the African Group preference, and their consideration should take into account Art. 9
Art. 9.2	Further consider the use of capacities versus capabilities
Art. 9.4 and 9.6	Include reference to the implementation of Parties' respective mitigation commitments
Art. 9.6	Clarify paragraph reference. (Reference was originally to link to substance that is now currently included in the decision text, paragraph 98.)
Art. 9.6 option 2	Further consider TACCC
Art. 9.6 option 2(a)	Insert "[using common metrics and] comparable methodologies as agreed on by the [CMA][COP]" at the end
Art. 9.6 option 2(c)	insert "implementing" between "towards" and "and"
	Article 10 (Global stocktake)
Art. 10.1	Insert "[take stock of the implementation of this Agreement to]" after "periodically"
Art. 10.1	Insert "[the objective of the Convention]" after "towards achieving"
Art. 10.1	Replace "long-term goals" with "long-term temperature goal"
Art. 10.2	Retain reference to 2023
Art. 10.2	Insert "[at regular intervals to be further decided by the CMA]" and bracket "every five years thereafter unless otherwise decided by the CMA"
Art. 10.3	Insert "[taking into account Parties' differentiated responsibilities and commitments under the Convention]"
Art. 10.3	Include reference to aggregate level of ambition communicated by Parties for subsequent periods
	Article 11 (Facilitating implementation and compliance)
Art 11.3 option 1	The rules of procedure of the [mechanism][committee] should be subject to approval by the CMA at its first session
	Articles 12 to 26 (Final clauses)
Art. 12.5	The CMA should adopt its own rules of procedure

Draft Decision

Provision	**Suggested changes**
	Intended nationally determined contributions
Para. 17	The gap in emissions should be indicated in temperature degrees
Para. 19	Include reference to consideration of consistency with below 1.5 °C scenarios in relation to aggregate
	Mitigation
	Bring back paragraphs 34 and 35 from compilation text into decision
	Finance
Para. 68	Missing notion of alternative approaches
Additional paragraph in finance section	Missing notion of modalities regarding the definition of short-term collective quantified goals to be developed by the CMA in the decision section related to Article 6
	Capacity-building

Paras. 91 to 92	Co-chair announced that corrections were made to the text
	Workstream 2
Preamble	Include text on CBDR in the Preamble
Para. 120(f) Accelerated Implementation	Include a revisit of the emission reduction targets by developed country Parties under the Convention or second commitment period of the Kyoto Protocol and increasing the target to 25–40 per cent below 1990 levels by 2020
125 bis Non-Party Stakeholder Engagement	Insert paragraph regarding the Declaration of the World People's Conference on Climate Change and the Defence of Life held in Tiquipaya, Bolivia, from 10 to 12 October 2015
General consistency	References to the body in charge of undertaking work in preparation for the entry into force should be consistent

United Nations FCCC/ADP/2015/L.6/Rev.1/Add.1*

Framework Convention on Climate Change

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Second session, part twelve
Paris, 29 November to 5 December 2015

Agenda item 3
Implementation of all the elements of decision 1/CP.17

Draft Paris Outcome

Revised draft conclusions proposed by the Co-Chairs

Addendum

Following the issuance of document FCCC/ADP/2015/L.6/Rev.1, additional textual suggestions were received from Parties. The table contained in annex II to document FCCC/ADP/2015/L.6/Rev.1 has been updated to reflect suggestions received as at 4 p.m. on 5 December 2015. Suggestions received thereafter will be made available on the UNFCCC website.[1] The updated table can be found in the annex.

* Reissued for technical reasons on 5 December 2015.

[1] <http://www4.unfccc.int/submissions/SitePages/sessions.aspx?showRefinementPanel=0&showOnlyInputCallForSubmissions=1>.

Please recycle

Annex

[English only]

Reflections note[1]

Draft Agreement

Provision	Suggested changes
General	Retain the following footnote: "Proposals which oppose the inclusion of certain provisions in the Agreement or the Decision do not figure in this text. This is on the understanding that the inclusion of a provision is without prejudice to the views of Parties that may not support the elaboration of any such provision at all."
Cross-cutting	For support provisions in Articles 3, 4, 7, and 8, add another option: "Support for developing country Parties with respect to [this article] is addressed in article 6." Both the purpose of transparency of support in Article 6 and the decision elements on MRV of support need to be further refined and discussed in tandem with the MRV of support text currently in Article 6 and the accompanying decision Insert "with due respect to sovereignty and territorial integrity of States" after the expression "people under occupation" respectively in Pp10, Article 2, paragraph 2, and Article 4, paragraph 5.
	Preamble
Pp2	Insert "and provisions" after "principles"
Pp2	Bracket "and being guided by its principles, including the principle of equity and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances,"
Pp4	Bracket "and equitable access to sustainable development, and reaffirming that responses to climate change should aim to meet the specific needs and concerns arising from the adverse impacts of response measures,"
Pp5	Insert "African countries"
Pp5	Insert "small mountainous developing States" at the end of the paragraph
Pp6	Insert "Central American isthmus"
Pp6	Insert "small mountainous developing States"
Pp6	Insert "African countries"
Pp10	Bracket
Pp10	Insert "climate change induced displaced people"
Pp10	Insert after "the right of indigenous peoples" the following text: "with local communities" Bracket "local communities" after "while taking into account the needs of local communities..."
Pp10	Bracket "climate" in the sentence "people in vulnerable climate situation"
Pp12	Replace "fundamental priority" with "importance'
Pp13	Insert after words "article 4, paragraph 1(d) of the Convention" the following text "including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems"
Pp14	Replace "and various actors" with "including subnational authorities, as well as non-state actors"
Pp14	Insert "sustainable lifestyles and sustainable patterns of production and production with developed countries taking the lead"
Pp14	Insert "and land" following "[…… sustainable management of forests]" Insert "protection of biodiversity" before "and of their non-carbon benefits"
	Article 1 (Definitions)

[1] This note is presented in the form of a tabular summary. Proposals to delete or to bracket text are reflected by using the term bracket.

Provision	Suggested changes
Art. 1	Include reference with regard to developing country Parties, including countries with economies in transition (as in footnote 6)
Art. 1	At the end of "For the purposes of this Agreement, all definitions contained in Article 1 of the Convention apply" add ",excepts that "Party" means a Party to this Agreement"
Art. 1	Insert placeholder for definition of "climate finance"
Art. 1	Include all definitions contained in the compilation text
	Article 2 (Purpose)
Art. 2	Bracket entire Article
Art. 2.1	Bracket "In order to strengthen the global response to the threat of climate change, Parties agree to take urgent action and enhance cooperation and support"
Art. 2.1	Insert "in accordance with equity and common but differentiated responsibilities"
Art. 2.1(c)	Bracket entire paragraph
Art. 2.1(c)	Bracket "that fosters climate resilient and low greenhouse gas emission societies and economies, and"
Art. 2.1(c)	Bracket "transformation" and insert "pathway" or "gradual shift"
Art. 2.2	Insert "integrity and resilience of natural ecosystems"
Art. 2.2	Insert "rights of indigenous peoples and the protection of Mother Earth"
Art. 2.2	Insert after "human rights", the words "indigenous people and local communities"
Art. 2.2	Insert after "human rights", the words "for all,"
Art. 2.2	Insert "just transition of the workforce and creation of decent work and quality jobs in accordance with nationally defined development priorities"
Art. 2.2	Bracket "shall"
Art. 2.2	Bracket ", and on the basis of respect for human rights and the promotion of gender equality [and the right of peoples under occupation]"
Art.2.2	Insert after the word "circumstances" the following text: "ensuring the integrity and resilience of natural Ecosystem"
	Article 2 bis (General)
Art. 2 bis	Bracket entire paragraph
	Article 3 (Mitigation)
Art. 3.1	Insert closing bracket
Art. 3.1(b)	Add "[reliable science]" after "[best available science]" Add 'net' before emissions
Art.3.1(c)	Add [net] after [zero] Add 'net' before emissions
Art.3.1(c)	Bracket zero and add "low"
Art. 3.1(d)	Add "[removal of greenhouse gases]" instead of "[decarbonization"]
Art. 3.2	Footnote 3: Reinstates option 4 of the footnote to become a part of the body of the subject Article.
Art. 3.3	Bracket option 1, including its paragraph 3bis Option 2, sub-option a: Add [shall] next to the first [should] and [shall strive] next to the [should aim]
Art. 3.4	Add "small mountainous developing states"
Art. 3.5	Option for placement after Art. 3.2

Provision	Suggested changes
Art. 3.5	Bring footnote 6 into the paragraph Bring footnote 6 into all other provisions which relate to support Add clarification of footnote 6 : The meaning of "support" within the context of footnote 6 includes access to financial resources, financial mechanisms and technology. Bracket option 2
Art. 3.6	Bracket "in light of different national circumstances"
Art. 3.7	Add "[Article 12 of the Convention, decision 1/CP.20 and]" after "in accordance with" Add "[may]" after "[shall]"
Art. 3.8	Bracket all paragraphs as implementation of footnote 1 and remove the no text option
Art. 3.9	Placement in decision Add option of first INDC automatically becoming the contribution under the Agreement[2]
Art. 3.10	Add the starting year for "subsequent" communication [2020][2021] Address common time frame after 2030 Add new option after option 2: "Timeframes for Parties' #### from 2030 onward will be further decided by the CMA" In option 1 replace "after" with "before" and "cycle" with "period" Bracket "every five years"
Art 3.11	Bracket entire paragraph as implementation of footnote 1
Art 3.12	Option for placement in Art. 9 Transparency
Art. 3.14	Option for placement in Art. 9 Transparency In option 2 add opening square bracket Bracket all paragraphs as implementation of footnote 1 and remove the no text option
Art. 3.15	Option for placement in Art. 9 Transparency Add into [or REDD-plus] the following "[and the joint mitigation and adaptation approach for the integral and sustainable management of forests]" Option 1: Add [from land use, including forests and REDD-plus] after the words "in respect of anthropogenic emissions and removals" Remove 'land use and REDD+' Replace 'may draw from' with 'SHALL APPLY' Bracket all paragraphs as implementation of footnote 1 and remove the no text option
Art. 3.16	Option for placement in the Preamble or Art. 2 Retain the placement of 3.16 as a part of Article 3 and remove one of the double brackets.
Art. 3.17	Option for placement in the Preamble or Art. 2
Art. 3.18	Option for placement after Art. 22 as Art .22 bis. Noted that Parties are consulting on textual solutions.
Art. 3.19	Bracket all paragraphs as implementation of footnote 1
Art. 3.20	Add "[guided by the principles and provisions of the Convention, Article 2, paragraph 2, of the Kyoto Protocol and the COP]" after "International Maritime Organization" Bracket ",with a view to agreeing concrete measures addressing these emissions, including developing procedures for incorporating emissions from international aviation and marine bunker fuels into low-emission development strategies" Bracket all paragraphs as implementation of footnote 1

[2] Note: This option is included in the decision text, paragraph 22.

Provision	Suggested changes
	Article 3 bis (REDD-plus)
Art. 3 bis	Option for placement after Art. 5 In paragraph 2 insert after 'decisions' the words 'ALREADY ADOPTED BY the COP', delete sentence after COP ('including decisions 9/CP/19 to 15/CP.19 and decision -/CP.21') Bracket paragraph 2 In paragraph 3 insert after 'developing countries, while enhancing', the words "AND ASSOCIATED NON-CARBON BENEFITS" Bracket paragraph 3 As alternative to Art 3bis, insert the sentence: "Parties are encouraged to reduce emissions, enhance removals, and conserve sinks and reservoirs as referred to in Article 4.1 (d) of the Convention."
	Article 3ter (Mechanism to support sustainable development)
Art. 3 ter	Bracket all paragraphs as implementation of footnote 1 Proposed Mechanism 1: Add additional bullet (d) bis after (d): "Deliver, where desired by participating Parties, a net decrease in or avoidance of emissions; Para 1 Insert 'INCLUDING REDD+' after 'Establishes a multi window mechanism' Proposed Mechanism 1: para1 (a) Bracket [developing country] and add [to this Agreement] after "Parties" Proposed Mechanism 1: para1 (c) Bracket [by developing country Parties] or remove the first bracket and leave the second Proposed Mechanism 1:para1 (e) Remove the first bracket and leave the second Proposed Mechanism 1: para 2 Remove all in para 2 Proposed Mechanism 1: para3 Remove brackets on the Article 6 Proposed Mechanism 2: Bracket [developing country] and add [countries in economy in transition]
	Article 4 (Adaptation)
	Make reference to support clearer; that is, who provides support and to whom
Art. 4.1	Include concept of long-term vision
Art. 4.3	Include concept of long-term vision
Art. 4.3(b)	Include concept of "platform"
Art. 4.4	Bracket entire paragraph
Art. 4.5	Bracket ", with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions, where appropriate"
Art. 4.6	Bracket "international cooperation and" Language will be provided in replacement of 4.6 by a group of Parties
Art. 4.7 chapeau	Bracket "shall" and "cooperation for enhancing"
Art. 4.7 (a)	Bracket
Art. 4.7(b)	Bracket "including those" Include "for the implementation of action" Add "support" after "technical support" Bracket "including those under the Convention"
Art. 4.7(c)	Bracket (in order to allow for consultations with relevant research and systematic observation experts)
Art. 4.7(c)	Include reference to early warning systems
Art. 4.7(d)	Bracket "effectiveness"
Art. 4.7(e)	Bracket ", and challenges and gaps in a manner consistent with encouraging good practices"

Provision	Suggested changes
Art. 4.7(f)	Bracket
Art. 4.8	Bracket Change “United Nations agencies” for “United Nations specialized organizations and agencies”
Art. 4.9 chapeau	Exchange for chapeau from compilation text (Art 4.6 chapeau) except words within the bracket [, commitments related to sustainable development,]”
Art. 4.9(d)	Bracket “enabling environments for” and include word “efforts” at the end of the sentence
Art. 4.9(e)	Change to “Monitoring and evaluation and learning from national adaptation plans, policies, programmes and actions”
Art. 4.10	Exchange for text from compilation text (paras 7(a), 7(b) and 7 bis) Bracket “support”
Art. 4.11 chapeau	Include language from compilation text to reflect the concept ‘’in a manner that does not create an additional burden on developing countries’’
Art. 4.11(b)	Exchange for text from compilation text (Art 4.8 (b))
Art. 4.13	Exchange for text from compilation text (Art. 4.12, option 2)
Art. 4.14	Include reference to Art. 10
	Article 5 (Loss and damage)
	Insert option 1 of the compilation Text as an alternative
	Replace the current bridging proposal with Option 1 of the Compilation document
	Bracket the entire article
	Include reference to climate change induced displaced people
Art. 5.1	Insert "and shall be bound by the principles and provisions of the Convention, including in particular principle of common but differentiated responsibilities" after "this Agreement".
Art. 5.3	Insert "as a result of extreme impacts of climate change" after "planned relocation"
	Article 6 (Finance)
Art. 6.1 Option1	Bracket ”finance flows” and insert “[provision of financial resources]” Bracket “low emission and climate resilient”
Art. 6.6	Concern about “result-based payments” Remove brackets all paragraph Insert “[and provide] after “mobilize” Insert “[and removals]” after “emission reductions”
Art. 6.8	Missing reference to “[and other vulnerable countries]”; however, it was clarified that the reference was indeed contained in the relevant paragraph
Art. 6.9	Missing reference to an indemnization mechanism; however, it was clarified that the reference was indeed contained in the relevant paragraph
Art. 6.9 Option 2	The correct language is “particularly disguised restrictions on international trade”.
Art. 6.10	Insert option 4: [Developed country Parties shall take the lead in enabling a major expansion to the flows of climate finance ($200-$300 billion), including the multilateral and private financial systems in support of mitigation, and adaptation, including climate resilient infrastructure, renewable energy, and REDD-plus, while increasing concessional grants for LDCs and SIDS.]
Art. 6.10 option 2	Missing reference to the concept of pathways and short-term collective quantified goals and an indication to provide textual proposals in this regard`

Provision	Suggested changes
Art. 6.11	Missing reference to the concept of scaled-up
Art. 6.14	Add “[small mountainous developing states]” after the end of “LDCs, SIDS, and African States”
Art. 6.15	Add “[small mountainous developing states]” after the end of “LDCs, SIDS, and African States”
Art. 6.18	Missing text around the development of guidelines pertaining to measurement, reporting and verification of support
Art. 6.19	Bracket “, including [the Green Climate Fund and the Global Environment Facility as] its operating entities [and related funds],”
Cross-cutting	Insert “[provision and mobilization]” or “[provide and mobilize”] wherever the words “mobilization” and “mobilize” are the only options
	Article 7 (Technology development and transfer)
Art. 7.1	Add in line 3 after “dissemination effort”: the urgency of realizing technology development and transfer
Art. 7.2	Add “socially and environmentally sound (technology)”
Art. 7.6	Option 1: bracket the option
	For support provisions in Articles 3, 4, 7, and 8, add another option: “Support for developing country Parties with respect to [this article] is addressed in article 6.”
	Article 8 (Capacity-building)
Art. 8.1 to 8.5	Co-chair announced that corrections were made to the text
Art 8.1	Option 2 & 3: Insert “small mountainous developing states”
8.3	Insert "[are encouraged to]" after "all Parties"
8.4	Insert "[developed country Parties]" after "[all Parties]" and insert "[developed country Parties]" before "[developing country Parties]"
8.4	Should include: developed country parties enhance the capacity of developing country parties to implement this Agreement, including through regional, bilateral and multilateral approaches
8.5	[Institutional arrangement under the Convention shall be enhanced, as appropriate, [The provision of] [in] support of capacity-building for the [effectiveness of capacity building] implementation of this Agreement]. [In order to further to further. Enhance capacity-building in accordance with this Agreement, an international capacity building mechanism is hereby established to serve the Agreement
	For support provisions in Articles 3, 4, 7, and 8, add another option: “Support for developing country Parties with respect to [this article] is addressed in article 6.”
Full article	Reference to cross-cutting issues related to transparency
	Article 8 bis
	None
	Article 9 (Transparency)
Art. 3.14 and 3.15	Include a clear reference to the African Group preference, and their consideration should take into account Art. 9
Art. 9.1	Transparency framework must build on and enhance existing arrangements
Art. 9.2	Further consider the use of capacities versus capabilities
Art. 9.2	Clarify the scope and elements of flexibility in both Article 9 and the decision
Art. 9.3, 9.4 and 9.5	Further consider the principles and purpose of transparency
Art. 9.3	Bracket “guided by the principles of the Convention and building on the provisions and arrangements under the Convention”
Art 9.5(c)	Insert “measurement, reporting and verification” in front of “of progress made by developed country Parties in providing support in accordance with Articles 6, 7 and 8”
Art. 9.4 and 9.6	Include reference to the implementation of Parties’ respective mitigation commitments

Provision	Suggested changes
Art. 9.6	Clarify paragraph reference. (Reference was originally to link to substance that is now currently included in the decision text, paragraph 98.)
Art. 9.6 option 2	Further consider TACCC
Art. 9.6 option 2(a)	Insert "[using common metrics and] comparable methodologies as agreed on by the [CMA][COP]" at the end
Art. 9.6 option 2(c)	insert "implementing" between "towards" and "and"
9.7	'SET OF' to replace 'common'
9.8	'SET OF' to replace 'common'
Art. 9.7	Enhancements of treatment of information provided must be nationally determined with full consideration of Article 9.10 of the Agreement.
Art. 9.7	Replace 'common' with 'set of'
Art. 9.8	Insert brackets around "[and the]" as follows: "The CMA shall, at its first session, building on experience from [and the] arrangements related to transparency under the Convention, and elaborating on the provisions in this Article, adopt [common] modalities, procedures and guidelines, as appropriate, for the transparency of action and support. [Placeholder to revisit this para pending outcomes of discussion on accounting]
Art. 9.8	Replace 'common' with 'set of'
	Both the purpose of transparency of support in Article 6 and the decision elements on MRV of support need to be further refined and discussed in tandem with the MRV of support text currently in Article 6 and the accompanying decision
	Article 10 (Global stocktake)
Art. 10.1	Insert "[take stock of the implementation of this Agreement to]" after "periodically"
Art. 10.1	Insert "[the objective of the Convention]" after "towards achieving"
Art. 10.1	Replace "long-term goals" with "long-term temperature goal"
Art.10.1	Bracket "long term goals"
Art. 10.2	Retain reference to 2023
Art. 10.2	Insert "[at regular intervals to be further decided by the CMA]" and bracket "every five years thereafter unless otherwise decided by the CMA"
Art. 10.3	Bracket "shall" and insert "[may]"
Art.10.3	Bracket "long term goals"
Art. 10.3	Bracket "outcome of" and insert "[of the outcome of the global stocktake]" after the word "Parties" in the first sentence
Art 10.3	Bracket "[enhancing their successive actions and support]"
Art. 10.3	Insert "[taking into account Parties' differentiated responsibilities and commitments under the Convention]"
Art. 10.3	Include reference to aggregate level of ambition communicated by Parties for subsequent periods
	Article 11 (Facilitating implementation and compliance)
Art. 11	A missing bracket at the beginning of the Article. It should be reinstated to reflect the "no option" options.
Art. 11.1	Bracket "expert-based"
Art 11.3 option 1	The rules of procedure of the [mechanism][committee] should be subject to approval by the CMA at its first session

Draft Decision

Provision	Suggested changes
	Preamble

Provision	Suggested changes
Pp4	Insert at the end of the paragraph: "adapting to the adverse effects of climate change, and ensuring the provision of finance, technology and capacity building from developed countries to developing countries"
Pp5	Bracket ultimate"
	Intended nationally determined contributions
Para. 1	Insert "Implementing" after "Paris"
Para. 17	The gap in emissions should be indicated in temperature degrees
Para 18	Insert, after Also notes in this context "the adaptation component included.."
Para. 19	Include reference to consideration of consistency with below 1.5 °C scenarios in relation to aggregate
	Mitigation
	Bring back paragraphs 34 and 35 from compilation text into decision
Para 22	Remove brackets
Para 23	Remove brackets
Para 24bis a)	Remove brackets
Para 29	Change 'and' with 'OR'
Para 25	Bracket options 1 and 2 under information
Para 28	Bracket bullet points b, c and e
Para 29	Bracket paragraph as implementation of footnote 1
Para 30	'MAY' to replace 'shall' Delete 'ALL' and 'IN THE LAND SECTOR' Insert 'AS APPROPRIATE' after 'develop,' Bracket all paragraphs as implementation of footnote 1
Para 31	Delete paragraph Bracket all paragraphs as implementation of footnote 1
	Finance
Para. 68	Missing notion of alternative approaches
Additional paragraph in finance section	Missing notion of modalities regarding the definition of short-term collective quantified goals to be developed by the CMA in the decision section related to Article 6
	Capacity-building
Paras. 91 to 92	Co-chair announced that corrections were made to the text
	Transparency
para 102	points d, e, f, g and l add brackets point d, replace "strive" with "efforts"
	Global Stocktake
Para. 109 (e) of Opt I	Bracket
Para. 109 (f) of Opt I	Bracket "[output of the collective monitoring reporting and verification process under Article 9 of the Agreement]"
Para. 109 (i) of Opt I	Bracket
Para. 109 (j) of Opt I	Bracket "[other inputs identified by the CMA]"

Provision	Suggested changes
Para. 110	Bracket
	Workstream 2
Preamble	Include text on CBDR in the Preamble
Pp1	Insert old Pp1 : ‘’ Reiterating the need to scale up quick-start opportunities that are cost effective and widely applicable, such as reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries, the joint mitigation and adaptation mechanism for the integral and sustainable management of forests, and renewable energy,’’
Pp2	Include a reference to decision 1/CP.16 (“also recalling decisions, 1/CP.16, 1/CP. 17, 2/CP.18, 1/CP.19 and 1/CP.20”)
Pp5	Bracket text
	Insert para "Welcoming the Dubai Pathway (Decision XXVII/1 of the 27th Meeting of the Parties to the Montreal Protocol) to work within the Montreal Protocol to an HFC amendment in 2016 and looking forward to its outcome. Underlines that addressing consumption and production of HFCs under the Montreal Protocol will complement the UNFCCC and will be an substantial contribution to pre-2020 action on reducing the mitigation gap."
	Insert para “Recognizing the importance and urgency of addressing, at a global level, greenhouse gas emissions from international shipping and aviation, in line with the below 2 degrees objective, as soon as possible, through the relevant specialized organisations within the UN.“ At least: add reference to relevant organisations addressing international shipping and aviation and welcome Dubai Pathway to preamble
113(a)	Insert at the end of paragraph “if they wish to do so”
Para. 123(f) Accelerated Implementation	Include a revisit of the emission reduction targets by developed country Parties under the Convention or second commitment period of the Kyoto Protocol and increasing the target to 25–40 per cent below 1990 levels by 2020
Option 2: *(paragraph 123)* Alt	Decides to [launch][conduct] a facilitative and exploratory [process][dialogue] in conjunction with the twenty-third session of the Conference of the Parties (November 2017) with a view to identifying ways to accelerate the implementation of commitments under he Convention in the pre-2020 period, including: (a)Opportunities to enhance the ambition of mitigation efforts by all Parties; (b)Opportunities to enhance the provision and mobilization of finance, technology and capacity-building support to developing country Parties [and other Parties in need of support, including countries with economies in transition,] in a holistic manner; (c) Request the TEPs referred to in paragraphs 114 and 130 to formulate a work programme to facilitate the [implementation] [realization] of the opportunities identified in (a) and (b) above.
128 bis Non-Party Stakeholder Engagement	Insert paragraph regarding the Declaration of the World People’s Conference on Climate Change and the Defence of Life held in Tiquipaya, Bolivia, from 10 to 12 October 2015
129(a)	Insert reference to para 133 after “paragraph 117 above” and insert reference to para 139(d) after “paragraph 119(c) below”
129(b)	Insert reference to para 133 after “paragraph 117 above” and insert reference to para 139(d) after “paragraph 119(c) below”
	Previous options 2 and 2 alt on adaptation needs to be reinserted
133 Adaptation	Second line, delete ‘’Adaptation Committee, in collaboration with the’’ Third line, after consultation with, add “the Adaptation Committee and other”
134 Adaptation	Delete ‘’endeavour’’
135 Adaptation	Delete paragraph 135 as it is similar to paragraph 133
136 Adaptation	• *First line, delete ‘’and the Adaptation Committee, in collaboration with’’* • *Add ‘’and’’ before Subsidiary Body for Scientific and Technological Advice* • *After SBSTA, add ‘’,* in conjunction with the Adaptation Committee and other relevant bodies,’’

Provision	Suggested changes
	• *after ''secretariat, will'' add ''* [assess gaps and needs for enhancing adaptation action, identify options for scaling up and replicating adaptation action and enhancing support, take stock of progress and'' and insert brackets around ''engage with and explore ways to take into account, synergize with and'' • before ''work'' add ''adaptation relevant '' • delete ''the'' in front of ''existing'' and delete also '' arrangements for adaptation related work programmes, bodies and institutions after'' and then add ''existing activities and endeavouring to avoid'' • Delete ''ing'' in the word ''avoiding'' and delete ''any''also
137	After ''will'' add '',inter alia,'' and delete ''be pursued though''
137 a) to f)	• In 137 a) to 137 b), change the verbs at the start of each list to their base form. • Move 137 a) to the bottom of the list • Add a new item as 137 a) to read : '' Assess gaps in adaptation work under the Convention and make recommendations to relevant bodies for addressing them'' • In 137 b) add after ''gaps'' the following: '' in the implementation of adaptation action'' and after ''capacity'' add ''building'' • In 137 f) bracket ''enabling environment''
Adaptation	Re-introduce option 2 and option 2 Alt from the compiled text
	Administrative and Budgetary Matters
146-150	To be consistent with draft Decision of SBI42 on the programme budget 2016-2017 to be adopted under COP Agenda item 19c;
147 and 150	Need to be redrafted to reflect the draft COP Decision above
General consistency	References to the body in charge of undertaking work in preparation for the entry into force should be consistent

United Nations FCCC/ADP/2015/6

Framework Convention on Climate Change

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Ad Hoc Working Group on the Durban Platform for Enhanced Action

Report of the Ad Hoc Working Group on the Durban Platform for Enhanced Action on the twelfth part of its second session, held in Paris from 29 November to 5 December 2015

Contents

		Paragraphs	*Page*
I.	Opening of the session (Agenda item 1)	1–5	2
II.	Organizational matters (Agenda item 2)	6–11	3
	A. Adoption of the agenda	6	3
	B. Organization of the work of the session	7–11	3
III.	Implementation of all the elements of decision 1/CP.17 (Agenda item 3)	12–16	4
IV.	Other matters (Agenda item 4)	17	4
V.	Report on the twelfth part of the second session (Agenda item 5)	18	5
VI.	Closure of the session	19–21	5

Annexes

I.	Documents before the Ad Hoc Working Group on the Durban Platform for Enhanced Action at the twelfth part of its second session	6
II.	Informal notes prepared for the Ad Hoc Working Group on the Durban Platform for Enhanced Action at the twelfth part of its second session	8

GE.16-01197(E)

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I. Opening of the session

(Agenda item 1)

1. The twelfth part of the second session of the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP) was held at the United Nations Climate Change Conference, Paris–Le Bourget, France, from 29 November to 5 December 2015.[1]

2. The Co-Chairs of the ADP, Mr. Ahmed Djoghlaf (non-Annex I) and Mr. Daniel Reifsnyder (Annex I), resumed the second session of the ADP by opening its 23rd plenary meeting on 29 November.[2] They welcomed all Parties and observers. They also welcomed Ms. Yang Liu (non-Annex I) as Rapporteur of the ADP.[3]

3. In order to fulfil the mandates and meet the timelines agreed on at the seventeenth session of the Conference of the Parties (COP)[4] and at COP 18,[5] 19[6] and 20,[7] the Co-Chairs recalled the objective set in their scenario note[8] for this session of the ADP, which was to finalize the draft Paris climate package containing a draft Paris agreement and an accompanying draft decision on workstreams 1 and 2, and to transmit the outcome of the work of the ADP to the COP for further consideration and adoption.

4. Statements were made by representatives of eight Parties, including on behalf of the Group of 77 and China, the European Union and its 28 member States, the Alliance of Small Island States, the Independent Association for Latin America and the Caribbean, the Coalition for Rainforest Nations, the BASIC countries (Brazil, China, India and South Africa), the Umbrella Group and Indonesia. Parties made their full group statements available on the UNFCCC website. In addition, statements on behalf of environmental non-governmental organizations (NGOs) and business and industry NGOs were made available on the UNFCCC website.[9]

5. Statements were also made on behalf of the Presidency of COP 20 and the tenth session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP), and the incoming Presidency of COP 21 and CMP 11.

[1] The report on the first and second parts of the second session of the ADP is contained in document FCCC/ADP/2013/2; the reports on the third, fourth, fifth, sixth, seventh, eighth, ninth, tenth and eleventh parts of the second session are contained in documents FCCC/ADP/2013/3, FCCC/ADP/2014/1, FCCC/ADP/2014/2, FCCC/ADP/2014/3, FCCC/ADP/2014/4, FCCC/ADP/2015/2, FCCC/ADP/2015/3, FCCC/ADP/2015/4 and FCCC/ADP/2015/5, respectively.

[2] The date of the opening plenary was advanced in order to make effective use of time, as proposed by the ADP Co-Chairs and agreed by the Bureau of the Conference of the Parties. See document ADP.2015.13.InformalNote.

[3] The Bureau of the ADP was elected in accordance with the arrangement set out in document FCCC/ADP/2012/2, paragraph 7, which was endorsed by decision 2/CP.18. The ADP elected the current members of its Bureau at the seventh part of its second session, as reflected in document FCCC/ADP/2014/4.

[4] Decision 1/CP.17, paragraph 4.

[5] Decision 2/CP.18, paragraph 4.

[6] Decision 1/CP.19, paragraph 2.

[7] Decision 1/CP.20, paragraph 1.

[8] ADP.2015.13.InformalNote.

[9] All the statements are available at <http://www4.unfccc.int/submissions/SitePages/sessions.aspx?years=2015&focalBodies=ADP>.

II. Organizational matters

(Agenda item 2)

A. Adoption of the agenda

(Agenda item 2(b))

6. The agenda for the second session of the ADP was adopted by the ADP at the 1st meeting of the session, on 29 April 2013.[10]

B. Organization of the work of the session

(Agenda item 2(c))

7. At the 23rd meeting, the Co-Chairs drew the delegates' attention to the scenario note prepared for the twelfth part of the session. They outlined the arrangements for the mode of work of the session, which had been developed via pre-sessional consultations with Parties and an informal consultation, convened on 28 November, with the Presidency of COP 20 and CMP 10 and the incoming Presidency of COP 21 and CMP 11.[11]

8. The organization of the work on agenda item 3, as clarified by the Co-Chairs following the aforementioned consultations, included an open-ended contact group established at the fourth part of the session.[12] The Co-Chairs recalled that the open-ended contact group was established as a central forum to provide direction to the work of the ADP, and to harvest the results of the various workstreams. This method of organization was designed to enable a collective, transparent and comprehensive overview of the status and progress of work. It was also designed to enhance the coherence of ADP deliberations, in particular with respect to cross-cutting issues.

9. In order to make the best use of limited time, the Co-Chairs proposed utilizing the well-established method of spin-off groups, seeking assistance from facilitators in taking work forward on specific issues. During this final phase of the ADP, the Co-Chairs noted that tasks assigned to spin-off groups should be very specific, time-bound and focused, maintaining the clear expectation of text-based results. The spin-off groups were to report back to the open-ended contact group with solutions and clean text wherever possible. The ADP proceeded on the basis of this proposal.

10. Ahead of the twelfth part of the session, the Co-Chairs, with the assistance of the facilitators and the support of the secretariat and the Presidencies, released a non-paper containing an edited draft agreement and draft decision[13] as well as an edited draft decision text on workstream 2 of the ADP.[14]

11. At the same time, Parties requested the secretariat to prepare a technical paper identifying closely related paragraphs and duplications within sections, as well as possible areas for streamlining. Parties clearly stated that this paper should be restricted to an

[10] FCCC/ADP/2013/2, paragraphs 8 and 9.

[11] See <http://unfccc.int/files/bodies/awg/application/pdf/speaking_notes_informal_adp_mtg_28_11_2015.pdf>.

[12] FCCC/ADP/2014/1, paragraph 19.

[13] ADP.2015.11.InformalNote.

[14] ADP.2015.10.InformalNote.

editorial exercise to clean up the text without changing its content. This document was made available on 6 November 2015.[15]

III. Implementation of all the elements of decision 1/CP.17

(Agenda item 3)

1. Proceedings

12. The ADP considered this agenda item at its 23rd meeting as well as its 24th meeting, held on 5 December. It had before it the documents referred to in paragraphs 7, 10 and 11 above, namely the technical paper identifying closely related concepts, duplication and possible areas for streamlining in the draft agreement and draft decision, the edited draft agreement, draft decision on workstreams 1 and 2 of the ADP, the edited draft decision on workstream 2 of the ADP, the scenario noted prepared for the twelfth part of the session and the Co-Chairs' note for the informal consultation held on 28 November 2015.

13. Throughout the session, inputs by Parties[16] as well as the work of the spin-off group meetings were captured and made publicly available daily on the UNFCCC website.[17] Three iterations of the draft agreement and draft decision were published on 3, 4 and 5 December. In addition, on 4 December a version of the draft agreement and draft decision containing bridging proposals by the spin-off group facilitators and a version containing bridging proposals highlighted in the draft agreement and draft decision were published. All iterations were made available on the UNFCCC website.[18]

2. Conclusions

14. At its 24th plenary meeting, the ADP had before it the draft conclusions proposed by the Co-Chairs as contained in document FCCC/ADP/2015/L.6.

15. At the same meeting, after consideration of the draft conclusions referred to in paragraph 14 above, the ADP agreed to transmit the text contained in annex I to the draft conclusions to COP 21 for further consideration. It also agreed to transmit the text contained in annex II to the draft conclusions to COP 21.[19]

16. Closing statements were made on behalf of the COP 21/CMP 11 Presidency. In addition, statements were made by representatives of 25 Parties, including on behalf of the Environmental Integrity Group, the Group of 77 and China, the European Union and its 28 member States, the Umbrella Group, the African Group, the least developed countries, the Alliance of Small Island States, the Coalition for Rainforest Nations, the Independent Association of Latin America and the Caribbean, the Like-minded Developing Countries, the League of Arab States and the BASIC countries.

IV. Other matters

(Agenda item 4)

17. The ADP considered this agenda item at its 23rd meeting. No other matters were raised.

[15] ADP.2015.12.InformalNote.

[16] See <http://www4.unfccc.int/submissions/SitePages/sessions.aspx?years=2015&focalBodies=ADP>.

[17] <http://unfccc.int/meetings/paris_nov_2015/items/9326.php>.

[18] <http://unfccc.int/meetings/paris_nov_2015/items/9340.php>.

[19] As contained in document FCCC/ADP/2015/L.6/Rev.1 and Add.1.

V. Report on the twelfth part of the second session

(Agenda item 5)

18. At its 24th meeting, the ADP considered and adopted the draft report on the twelfth part of its second session.[20] At the same meeting, following the proposal of the Co-Chairs, the ADP authorized the Rapporteur to complete the report on the twelfth part of the session with the assistance of the secretariat and under the guidance of the Co-Chairs.

VI. Closure of the session

19. At the 24th meeting, the Co-Chairs expressed their gratitude to previous Co-Chairs of the ADP and to those delegates who had co-facilitated the work of the ADP throughout the year, lauding their dedication and hard work in guiding the informal meetings of the ADP.

20. The Co-Chairs also thanked the Parties for their outstanding work and dedication.

21. At the same meeting, the Co-Chairs declared the second session of the ADP closed.

[20] FCCC/ADP/2015/L.5.

Annex I

Documents before the Ad Hoc Working Group on the Durban Platform for Enhanced Action at the twelfth part of its second session

Documents prepared for the twelfth part of the session

FCCC/ADP/2015/L.5	Draft report of the Ad Hoc Working Group on the Durban Platform for Enhanced Action on the twelfth part of its second session, held in Paris from 29 November to 5 December 2015

Other documents before the session

FCCC/CP/2014/10 and Add.1	Report of the Conference of the Parties on its twentieth session, held in Lima from 1 to 14 December 2014
FCCC/CP/2013/10 and Add.1	Report of the Conference of the Parties on its nineteenth session, held in Warsaw from 11 to 23 November 2013
FCCC/CP/2012/8 and Add.1	Report of the Conference of the Parties on its eighteenth session, held in Doha from 26 November to 8 December 2012
FCCC/CP/2011/9 and Add.1 and 2	Report of the Conference of the Parties on its seventeenth session, held in Durban from 28 November to 11 December 2011
FCCC/ADP/2015/5	Report of the Ad Hoc Working Group on the Durban Platform for Enhanced Action on the eleventh part of its second session, held in Bonn from 19 to 23 October 2015
FCCC/ADP/2015/4	Report of the Ad Hoc Working Group on the Durban Platform for Enhanced Action on the tenth part of its second session, held in Bonn from 31 August to 4 September 2015
FCCC/ADP/2015/3	Report of the Ad Hoc Working Group on the Durban Platform for Enhanced Action on the ninth part of its second session, held in Bonn from 1 to 11 June 2015
FCCC/ADP/2015/2	Report of the Ad Hoc Working Group on the Durban Platform for Enhanced Action on the eighth part of its second session, held in Geneva from 8 to 13 February 2015
FCCC/ADP/2015/1	Negotiating text
FCCC/ADP/2014/4	Report of the Ad Hoc Working Group on the Durban Platform for Enhanced Action on the seventh part of its second session, held in Lima

	from 2 to 13 December 2014
FCCC/ADP/2014/3	Report of the Ad Hoc Working Group on the Durban Platform for Enhanced Action on the sixth part of its second session, held in Bonn from 20 to 25 October 2014
FCCC/ADP/2014/2	Report of the Ad Hoc Working Group on the Durban Platform for Enhanced Action on the fifth part of its second session, held in Bonn from 4 to 14 June 2014
FCCC/ADP/2014/1	Report of the Ad Hoc Working Group on the Durban Platform for Enhanced Action on the fourth part of its second session, held in Bonn from 10 to 14 March 2014
FCCC/ADP/2013/3	Report of the Ad Hoc Working Group on the Durban Platform for Enhanced Action on the third part of its second session, held in Warsaw from 12 to 23 November 2013
FCCC/ADP/2013/2	Report of the Ad Hoc Working Group on the Durban Platform for Enhanced Action on the first and second parts of its second session, held in Bonn from 29 April to 3 May 2013 and from 4 to 13 June 2013
FCCC/ADP/2012/3	Report of the Ad Hoc Working Group on the Durban Platform for Enhanced Action on the second part of its first session, held in Doha from 27 November to 7 December 2012
FCCC/ADP/2012/2	Report of the Ad Hoc Working Group on the Durban Platform for Enhanced Action on the first part of its first session, held in Bonn from 17 to 25 May 2012

Annex II

Informal notes prepared for the Ad Hoc Working Group on the Durban Platform for Enhanced Action at the twelfth part of its second session

ADP.2015.10.InformalNote	Draft decision on workstream 2 of the Ad Hoc Working Group on the Durban Platform for Enhanced Action
ADP.2015.11.InformalNote	Draft agreement and draft decision on workstreams 1 and 2 of the Ad Hoc Working Group on the Durban Platform for Enhanced Action
ADP.2015.12.InformalNote	Technical paper identifying closely related concepts, duplication and possible areas for streamlining in the draft Agreement and draft Decision
ADP.2015.13.InformalNote	Scenario note on the twelfth part of the second session of the Ad Hoc Working Group on the Durban Platform for Enhanced Action. Note by the Co-Chairs

United Nations FCCC/CP/2015/10/Add.1

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Conference of the Parties

Report of the Conference of the Parties on its twenty-first session, held in Paris from 30 November to 13 December 2015

Addendum

Part two: Action taken by the Conference of the Parties at its twenty-first session

Contents

Decisions adopted by the Conference of the Parties

Decision		*Page*
1/CP.21	Adoption of the Paris Agreement	2

GE.16-01194(E)

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Decision 1/CP.21

Adoption of the Paris Agreement

The Conference of the Parties,

Recalling decision 1/CP.17 on the establishment of the Ad Hoc Working Group on the Durban Platform for Enhanced Action,

Also recalling Articles 2, 3 and 4 of the Convention,

Further recalling relevant decisions of the Conference of the Parties, including decisions 1/CP.16, 2/CP.18, 1/CP.19 and 1/CP.20,

Welcoming the adoption of United Nations General Assembly resolution A/RES/70/1, "Transforming our world: the 2030 Agenda for Sustainable Development", in particular its goal 13, and the adoption of the Addis Ababa Action Agenda of the third International Conference on Financing for Development and the adoption of the Sendai Framework for Disaster Risk Reduction,

Recognizing that climate change represents an urgent and potentially irreversible threat to human societies and the planet and thus requires the widest possible cooperation by all countries, and their participation in an effective and appropriate international response, with a view to accelerating the reduction of global greenhouse gas emissions,

Also recognizing that deep reductions in global emissions will be required in order to achieve the ultimate objective of the Convention and *emphasizing* the need for urgency in addressing climate change,

Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity,

Also acknowledging the specific needs and concerns of developing country Parties arising from the impact of the implementation of response measures and, in this regard, decisions 5/CP.7, 1/CP.10, 1/CP.16 and 8/CP.17,

Emphasizing with serious concern the urgent need to address the significant gap between the aggregate effect of Parties' mitigation pledges in terms of global annual emissions of greenhouse gases by 2020 and aggregate emission pathways consistent with holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels,

Also emphasizing that enhanced pre-2020 ambition can lay a solid foundation for enhanced post-2020 ambition,

Stressing the urgency of accelerating the implementation of the Convention and its Kyoto Protocol in order to enhance pre-2020 ambition,

Recognizing the urgent need to enhance the provision of finance, technology and capacity-building support by developed country Parties, in a predictable manner, to enable enhanced pre-2020 action by developing country Parties,

Emphasizing the enduring benefits of ambitious and early action, including major reductions in the cost of future mitigation and adaptation efforts,

Acknowledging the need to promote universal access to sustainable energy in developing countries, in particular in Africa, through the enhanced deployment of renewable energy,

Agreeing to uphold and promote regional and international cooperation in order to mobilize stronger and more ambitious climate action by all Parties and non-Party stakeholders, including civil society, the private sector, financial institutions, cities and other subnational authorities, local communities and indigenous peoples,

I. Adoption

1. *Decides* to adopt the Paris Agreement under the United Nations Framework Convention on Climate Change (hereinafter referred to as "the Agreement") as contained in the annex;

2. *Requests* the Secretary-General of the United Nations to be the Depositary of the Agreement and to have it open for signature in New York, United States of America, from 22 April 2016 to 21 April 2017;

3. *Invites* the Secretary-General to convene a high-level signature ceremony for the Agreement on 22 April 2016;

4. *Also invites* all Parties to the Convention to sign the Agreement at the ceremony to be convened by the Secretary-General, or at their earliest opportunity, and to deposit their respective instruments of ratification, acceptance, approval or accession, where appropriate, as soon as possible;

5. *Recognizes* that Parties to the Convention may provisionally apply all of the provisions of the Agreement pending its entry into force, and *requests* Parties to provide notification of any such provisional application to the Depositary;

6. *Notes* that the work of the Ad Hoc Working Group on the Durban Platform for Enhanced Action, in accordance with decision 1/CP.17, paragraph 4, has been completed;

7. *Decides* to establish the Ad Hoc Working Group on the Paris Agreement under the same arrangement, mutatis mutandis, as those concerning the election of officers to the Bureau of the Ad Hoc Working Group on the Durban Platform for Enhanced Action;[1]

8. *Also decides* that the Ad Hoc Working Group on the Paris Agreement shall prepare for the entry into force of the Agreement and for the convening of the first session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

9. *Further decides* to oversee the implementation of the work programme resulting from the relevant requests contained in this decision;

10. *Requests* the Ad Hoc Working Group on the Paris Agreement to report regularly to the Conference of the Parties on the progress of its work and to complete its work by the first session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

11. *Decides* that the Ad Hoc Working Group on the Paris Agreement shall hold its sessions starting in 2016 in conjunction with the sessions of the Convention subsidiary bodies and shall prepare draft decisions to be recommended through the Conference of the Parties to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement for consideration and adoption at its first session;

[1] Endorsed by decision 2/CP.18, paragraph 2.

II. Intended nationally determined contributions

12. *Welcomes* the intended nationally determined contributions that have been communicated by Parties in accordance with decision 1/CP.19, paragraph 2(b);

13. *Reiterates* its invitation to all Parties that have not yet done so to communicate to the secretariat their intended nationally determined contributions towards achieving the objective of the Convention as set out in its Article 2 as soon as possible and well in advance of the twenty-second session of the Conference of the Parties (November 2016) and in a manner that facilitates the clarity, transparency and understanding of the intended nationally determined contributions;

14. *Requests* the secretariat to continue to publish the intended nationally determined contributions communicated by Parties on the UNFCCC website;

15. *Reiterates* its call to developed country Parties, the operating entities of the Financial Mechanism and any other organizations in a position to do so to provide support for the preparation and communication of the intended nationally determined contributions of Parties that may need such support;

16. *Takes note* of the synthesis report on the aggregate effect of intended nationally determined contributions communicated by Parties by 1 October 2015, contained in document FCCC/CP/2015/7;

17. *Notes with concern* that the estimated aggregate greenhouse gas emission levels in 2025 and 2030 resulting from the intended nationally determined contributions do not fall within least-cost 2 ˚C scenarios but rather lead to a projected level of 55 gigatonnes in 2030, and *also notes* that much greater emission reduction efforts will be required than those associated with the intended nationally determined contributions in order to hold the increase in the global average temperature to below 2 ˚C above pre-industrial levels by reducing emissions to 40 gigatonnes or to 1.5 ˚C above pre-industrial levels by reducing to a level to be identified in the special report referred to in paragraph 21 below;

18. *Further notes*, in this context, the adaptation needs expressed by many developing country Parties in their intended nationally determined contributions;

19. *Requests* the secretariat to update the synthesis report referred to in paragraph 16 above so as to cover all the information in the intended nationally determined contributions communicated by Parties pursuant to decision 1/CP.20 by 4 April 2016 and to make it available by 2 May 2016;

20. *Decides* to convene a facilitative dialogue among Parties in 2018 to take stock of the collective efforts of Parties in relation to progress towards the long-term goal referred to in Article 4, paragraph 1, of the Agreement and to inform the preparation of nationally determined contributions pursuant to Article 4, paragraph 8, of the Agreement;

21. *Invites* the Intergovernmental Panel on Climate Change to provide a special report in 2018 on the impacts of global warming of 1.5 °C above pre-industrial levels and related global greenhouse gas emission pathways;

III. Decisions to give effect to the Agreement

Mitigation

22. *Also invites* Parties to communicate their first nationally determined contribution no later than when the Party submits its respective instrument of ratification, acceptance, approval or accession of the Paris Agreement; if a Party has communicated an intended

nationally determined contribution prior to joining the Agreement, that Party shall be considered to have satisfied this provision unless that Party decides otherwise;

23. *Requests* those Parties whose intended nationally determined contribution pursuant to decision 1/CP.20 contains a time frame up to 2025 to communicate by 2020 a new nationally determined contribution and to do so every five years thereafter pursuant to Article 4, paragraph 9, of the Agreement;

24. *Also requests* those Parties whose intended nationally determined contribution pursuant to decision 1/CP.20 contains a time frame up to 2030 to communicate or update by 2020 these contributions and to do so every five years thereafter pursuant to Article 4, paragraph 9, of the Agreement;

25. *Decides* that Parties shall submit to the secretariat their nationally determined contributions referred to in Article 4 of the Agreement at least 9 to 12 months in advance of the relevant session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement with a view to facilitating the clarity, transparency and understanding of these contributions, including through a synthesis report prepared by the secretariat;

26. *Requests* the Ad Hoc Working Group on the Paris Agreement to develop further guidance on features of the nationally determined contributions for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

27. *Agrees* that the information to be provided by Parties communicating their nationally determined contributions, in order to facilitate clarity, transparency and understanding, may include, as appropriate, inter alia, quantifiable information on the reference point (including, as appropriate, a base year), time frames and/or periods for implementation, scope and coverage, planning processes, assumptions and methodological approaches including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals, and how the Party considers that its nationally determined contribution is fair and ambitious, in the light of its national circumstances, and how it contributes towards achieving the objective of the Convention as set out in its Article 2;

28. *Requests* the Ad Hoc Working Group on the Paris Agreement to develop further guidance for the information to be provided by Parties in order to facilitate clarity, transparency and understanding of nationally determined contributions for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

29. *Also requests* the Subsidiary Body for Implementation to develop modalities and procedures for the operation and use of the public registry referred to in Article 4, paragraph 12, of the Agreement, for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

30. *Further requests* the secretariat to make available an interim public registry in the first half of 2016 for the recording of nationally determined contributions submitted in accordance with Article 4 of the Agreement, pending the adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement of the modalities and procedures referred to in paragraph 29 above;

31. *Requests* the Ad Hoc Working Group on the Paris Agreement to elaborate, drawing from approaches established under the Convention and its related legal instruments as appropriate, guidance for accounting for Parties' nationally determined contributions, as referred to in Article 4, paragraph 13, of the Agreement, for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session, which ensures that:

(a) Parties account for anthropogenic emissions and removals in accordance with methodologies and common metrics assessed by the Intergovernmental Panel on Climate Change and adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

(b) Parties ensure methodological consistency, including on baselines, between the communication and implementation of nationally determined contributions;

(c) Parties strive to include all categories of anthropogenic emissions or removals in their nationally determined contributions and, once a source, sink or activity is included, continue to include it;

(d) Parties shall provide an explanation of why any categories of anthropogenic emissions or removals are excluded;

32. *Decides* that Parties shall apply the guidance referred to in paragraph 31 above to the second and subsequent nationally determined contributions and that Parties may elect to apply such guidance to their first nationally determined contribution;

33. *Also decides* that the forum on the impact of the implementation of response measures, under the subsidiary bodies, shall continue, and shall serve the Agreement;

34. *Further decides* that the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation shall recommend, for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session, the modalities, work programme and functions of the forum on the impact of the implementation of response measures to address the effects of the implementation of response measures under the Agreement by enhancing cooperation amongst Parties on understanding the impacts of mitigation actions under the Agreement and the exchange of information, experiences, and best practices amongst Parties to raise their resilience to these impacts;

35. *Invites* Parties to communicate, by 2020, to the secretariat mid-century, long-term low greenhouse gas emission development strategies in accordance with Article 4, paragraph 19, of the Agreement, and *requests* the secretariat to publish on the UNFCCC website Parties' low greenhouse gas emission development strategies as communicated;

36. *Requests* the Subsidiary Body for Scientific and Technological Advice to develop and recommend the guidance referred to under Article 6, paragraph 2, of the Agreement for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session, including guidance to ensure that double counting is avoided on the basis of a corresponding adjustment by Parties for both anthropogenic emissions by sources and removals by sinks covered by their nationally determined contributions under the Agreement;

37. *Recommends* that the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement adopt rules, modalities and procedures for the mechanism established by Article 6, paragraph 4, of the Agreement on the basis of:

(a) Voluntary participation authorized by each Party involved;

(b) Real, measurable, and long-term benefits related to the mitigation of climate change;

(c) Specific scopes of activities;

(d) Reductions in emissions that are additional to any that would otherwise occur;

(e) Verification and certification of emission reductions resulting from mitigation activities by designated operational entities;

(f) Experience gained with and lessons learned from existing mechanisms and approaches adopted under the Convention and its related legal instruments;

38. *Requests* the Subsidiary Body for Scientific and Technological Advice to develop and recommend rules, modalities and procedures for the mechanism referred to in paragraph 37 above for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

39. *Also requests* the Subsidiary Body for Scientific and Technological Advice to undertake a work programme under the framework for non-market approaches to sustainable development referred to in Article 6, paragraph 8, of the Agreement, with the objective of considering how to enhance linkages and create synergy between, inter alia, mitigation, adaptation, finance, technology transfer and capacity-building, and how to facilitate the implementation and coordination of non-market approaches;

40. *Further requests* the Subsidiary Body for Scientific and Technological Advice to recommend a draft decision on the work programme referred to in paragraph 39 above, taking into account the views of Parties, for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

Adaptation

41. *Requests* the Adaptation Committee and the Least Developed Countries Expert Group to jointly develop modalities to recognize the adaptation efforts of developing country Parties, as referred to in Article 7, paragraph 3, of the Agreement, and make recommendations for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

42. *Also requests* the Adaptation Committee, taking into account its mandate and its second three-year workplan, and with a view to preparing recommendations for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session:

(a) To review, in 2017, the work of adaptation-related institutional arrangements under the Convention, with a view to identifying ways to enhance the coherence of their work, as appropriate, in order to respond adequately to the needs of Parties;

(b) To consider methodologies for assessing adaptation needs with a view to assisting developing country Parties, without placing an undue burden on them;

43. *Invites* all relevant United Nations agencies and international, regional and national financial institutions to provide information to Parties through the secretariat on how their development assistance and climate finance programmes incorporate climate-proofing and climate resilience measures;

44. *Requests* Parties to strengthen regional cooperation on adaptation where appropriate and, where necessary, establish regional centres and networks, in particular in developing countries, taking into account decision 1/CP.16, paragraph 30;

45. *Also requests* the Adaptation Committee and the Least Developed Countries Expert Group, in collaboration with the Standing Committee on Finance and other relevant institutions, to develop methodologies, and make recommendations for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session on:

(a) Taking the necessary steps to facilitate the mobilization of support for adaptation in developing countries in the context of the limit to global average temperature increase referred to in Article 2 of the Agreement;

(b) Reviewing the adequacy and effectiveness of adaptation and support referred to in Article 7, paragraph 14(c), of the Agreement;

46. *Further requests* the Green Climate Fund to expedite support for the least developed countries and other developing country Parties for the formulation of national adaptation plans, consistent with decisions 1/CP.16 and 5/CP.17, and for the subsequent implementation of policies, projects and programmes identified by them;

Loss and damage

47. *Decides* on the continuation of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, following the review in 2016;

48. *Requests* the Executive Committee of the Warsaw International Mechanism to establish a clearing house for risk transfer that serves as a repository for information on insurance and risk transfer, in order to facilitate the efforts of Parties to develop and implement comprehensive risk management strategies;

49. *Also requests* the Executive Committee of the Warsaw International Mechanism to establish, according to its procedures and mandate, a task force to complement, draw upon the work of and involve, as appropriate, existing bodies and expert groups under the Convention including the Adaptation Committee and the Least Developed Countries Expert Group, as well as relevant organizations and expert bodies outside the Convention, to develop recommendations for integrated approaches to avert, minimize and address displacement related to the adverse impacts of climate change;

50. *Further requests* the Executive Committee of the Warsaw International Mechanism to initiate its work, at its next meeting, to operationalize the provisions referred to in paragraphs 48 and 49 above, and to report on progress thereon in its annual report;

51. *Agrees* that Article 8 of the Agreement does not involve or provide a basis for any liability or compensation;

Finance

52. *Decides* that, in the implementation of the Agreement, financial resources provided to developing country Parties should enhance the implementation of their policies, strategies, regulations and action plans and their climate change actions with respect to both mitigation and adaptation to contribute to the achievement of the purpose of the Agreement as defined in its Article 2;

53. *Also decides* that, in accordance with Article 9, paragraph 3, of the Agreement, developed countries intend to continue their existing collective mobilization goal through 2025 in the context of meaningful mitigation actions and transparency on implementation; prior to 2025 the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall set a new collective quantified goal from a floor of USD 100 billion per year, taking into account the needs and priorities of developing countries;

54. *Recognizes* the importance of adequate and predictable financial resources, including for results-based payments, as appropriate, for the implementation of policy approaches and positive incentives for reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks; as well as alternative policy approaches, such as joint mitigation and adaptation approaches for the integral and sustainable management of forests; while reaffirming the importance of non-carbon benefits associated with such

approaches; encouraging the coordination of support from, inter alia, public and private, bilateral and multilateral sources, such as the Green Climate Fund, and alternative sources in accordance with relevant decisions by the Conference of the Parties;

55. *Decides* to initiate, at its twenty-second session, a process to identify the information to be provided by Parties, in accordance with Article 9, paragraph 5, of the Agreement with a view to providing a recommendation for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

56. *Also decides* to ensure that the provision of information in accordance with Article 9, paragraph 7, of the Agreement shall be undertaken in accordance with the modalities, procedures and guidelines referred to in paragraph 91 below;

57. *Requests* the Subsidiary Body for Scientific and Technological Advice to develop modalities for the accounting of financial resources provided and mobilized through public interventions in accordance with Article 9, paragraph 7, of the Agreement for consideration by the Conference of the Parties at its twenty-fourth session (November 2018), with a view to making a recommendation for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

58. *Decides* that the Green Climate Fund and the Global Environment Facility, the entities entrusted with the operation of the Financial Mechanism of the Convention, as well as the Least Developed Countries Fund and the Special Climate Change Fund, administered by the Global Environment Facility, shall serve the Agreement;

59. *Recognizes* that the Adaptation Fund may serve the Agreement, subject to relevant decisions by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

60. *Invites* the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol to consider the issue referred to in paragraph 59 above and make a recommendation to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

61. *Recommends* that the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall provide guidance to the entities entrusted with the operation of the Financial Mechanism of the Convention on the policies, programme priorities and eligibility criteria related to the Agreement for transmission by the Conference of the Parties;

62. *Decides* that the guidance to the entities entrusted with the operations of the Financial Mechanism of the Convention in relevant decisions of the Conference of the Parties, including those agreed before adoption of the Agreement, shall apply mutatis mutandis to the Agreement;

63. *Also decides* that the Standing Committee on Finance shall serve the Agreement in line with its functions and responsibilities established under the Conference of the Parties;

64. *Urges* the institutions serving the Agreement to enhance the coordination and delivery of resources to support country-driven strategies through simplified and efficient application and approval procedures, and through continued readiness support to developing country Parties, including the least developed countries and small island developing States, as appropriate;

Technology development and transfer

65. *Takes note* of the interim report of the Technology Executive Committee on guidance on enhanced implementation of the results of technology needs assessments as contained in document FCCC/SB/2015/INF.3;

66. *Decides* to strengthen the Technology Mechanism and *requests* the Technology Executive Committee and the Climate Technology Centre and Network, in supporting the implementation of the Agreement, to undertake further work relating to, inter alia:

(a) Technology research, development and demonstration;

(b) The development and enhancement of endogenous capacities and technologies;

67. *Requests* the Subsidiary Body for Scientific and Technological Advice to initiate, at its forty-fourth session (May 2016), the elaboration of the technology framework established under Article 10, paragraph 4, of the Agreement and to report on its findings to the Conference of the Parties, with a view to the Conference of the Parties making a recommendation on the framework to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement for consideration and adoption at its first session, taking into consideration that the framework should facilitate, inter alia:

(a) The undertaking and updating of technology needs assessments, as well as the enhanced implementation of their results, particularly technology action plans and project ideas, through the preparation of bankable projects*;*

(b) The provision of enhanced financial and technical support for the implementation of the results of the technology needs assessments;

(c) The assessment of technologies that are ready for transfer;

(d) The enhancement of enabling environments for and the addressing of barriers to the development and transfer of socially and environmentally sound technologies;

68. *Decides* that the Technology Executive Committee and the Climate Technology Centre and Network shall report to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement, through the subsidiary bodies, on their activities to support the implementation of the Agreement;

69. *Also decides* to undertake a periodic assessment of the effectiveness and adequacy of the support provided to the Technology Mechanism in supporting the implementation of the Agreement on matters relating to technology development and transfer;

70. *Requests* the Subsidiary Body for Implementation to initiate, at its forty-fourth session, the elaboration of the scope of and modalities for the periodic assessment referred to in paragraph 69 above, taking into account the review of the Climate Technology Centre and Network as referred to in decision 2/CP.17, annex VII, paragraph 20, and the modalities for the global stocktake referred to in Article 14 of the Agreement, for consideration and adoption by the Conference of the Parties at its twenty-fifth session (November 2019);

Capacity-building

71. *Decides* to establish the Paris Committee on Capacity-building whose aim will be to address gaps and needs, both current and emerging, in implementing capacity-building in developing country Parties and further enhancing capacity-building efforts, including with regard to coherence and coordination in capacity-building activities under the Convention;

72. *Also decides* that the Paris Committee on Capacity-building will manage and oversee the workplan referred to in paragraph 73 below;

73. *Further decides* to launch a workplan for the period 2016–2020 with the following activities:

(a) Assessing how to increase synergies through cooperation and avoid duplication among existing bodies established under the Convention that implement capacity-building activities, including through collaborating with institutions under and outside the Convention;

(b) Identifying capacity gaps and needs and recommending ways to address them;

(c) Promoting the development and dissemination of tools and methodologies for the implementation of capacity-building;

(d) Fostering global, regional, national and subnational cooperation;

(e) Identifying and collecting good practices, challenges, experiences and lessons learned from work on capacity-building by bodies established under the Convention;

(f) Exploring how developing country Parties can take ownership of building and maintaining capacity over time and space;

(g) Identifying opportunities to strengthen capacity at the national, regional and subnational level;

(h) Fostering dialogue, coordination, collaboration and coherence among relevant processes and initiatives under the Convention, including through exchanging information on capacity-building activities and strategies of bodies established under the Convention;

(i) Providing guidance to the secretariat on the maintenance and further development of the web-based capacity-building portal;

74. *Decides* that the Paris Committee on Capacity-building will annually focus on an area or theme related to enhanced technical exchange on capacity-building, with the purpose of maintaining up-to-date knowledge on the successes and challenges in building capacity effectively in a particular area;

75. *Requests* the Subsidiary Body for Implementation to organize annual in-session meetings of the Paris Committee on Capacity-building;

76. *Also requests* the Subsidiary Body for Implementation to develop the terms of reference for the Paris Committee on Capacity-building, in the context of the third comprehensive review of the implementation of the capacity-building framework, also taking into account paragraphs 71–75 above and paragraphs 79 and 80 below, with a view to recommending a draft decision on this matter for consideration and adoption by the Conference of the Parties at its twenty-second session;

77. *Invites* Parties to submit their views on the membership of the Paris Committee on Capacity-building by 9 March 2016;[2]

78. *Requests* the secretariat to compile the submissions referred to in paragraph 77 above into a miscellaneous document for consideration by the Subsidiary Body for Implementation at its forty-fourth session;

79. *Decides* that the inputs to the Paris Committee on Capacity-building will include, inter alia, submissions, the outcome of the third comprehensive review of the implementation of the capacity-building framework, the secretariat's annual synthesis report on the implementation of the framework for capacity-building in developing

[2] Parties should submit their views via the submissions portal at <http://www.unfccc.int/5900>.

countries, the secretariat's compilation and synthesis report on capacity-building work of bodies established under the Convention and its Kyoto Protocol, and reports on the Durban Forum and the capacity-building portal;

80. *Requests* the Paris Committee on Capacity-building to prepare annual technical progress reports on its work, and to make these reports available at the sessions of the Subsidiary Body for Implementation coinciding with the sessions of the Conference of the Parties;

81. *Decides*, at its twenty-fifth session, to review the progress, need for extension, the effectiveness and enhancement of the Paris Committee on Capacity-building and to take any action it considers appropriate, with a view to making recommendations to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session on enhancing institutional arrangements for capacity-building consistent with Article 11, paragraph 5, of the Agreement;

82. *Calls upon* all Parties to ensure that education, training and public awareness, as reflected in Article 6 of the Convention and in Article 12 of the Agreement, are adequately considered in their contribution to capacity-building;

83. *Invites* the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement, at its first session, to explore ways of enhancing the implementation of training, public awareness, public participation and public access to information so as to enhance actions under the Agreement;

Transparency of action and support

84. *Decides* to establish a Capacity-building Initiative for Transparency in order to build institutional and technical capacity, both pre- and post-2020; this initiative will support developing country Parties, upon request, in meeting enhanced transparency requirements as defined in Article 13 of the Agreement in a timely manner;

85. *Also decides* that the Capacity-building Initiative for Transparency will aim:

(a) To strengthen national institutions for transparency-related activities in line with national priorities;

(b) To provide relevant tools, training and assistance for meeting the provisions stipulated in Article 13 of the Agreement;

(c) To assist in the improvement of transparency over time;

86. *Urges and requests* the Global Environment Facility to make arrangements to support the establishment and operation of the Capacity-building Initiative for Transparency as a priority reporting-related need, including through voluntary contributions to support developing country Parties in the sixth replenishment of the Global Environment Facility and future replenishment cycles, to complement existing support under the Global Environment Facility;

87. *Decides* to assess the implementation of the Capacity-building Initiative for Transparency in the context of the seventh review of the Financial Mechanism;

88. *Requests* that the Global Environment Facility, as an operating entity of the Financial Mechanism, include in its annual report to the Conference of the Parties the progress of work in the design, development and implementation of the Capacity-building Initiative for Transparency referred to in paragraph 84 above starting in 2016;

89. *Decides* that, in accordance with Article 13, paragraph 2, of the Agreement, developing country Parties shall be provided flexibility in the implementation of the provisions of that Article, including in the scope, frequency and level of detail of reporting,

and in the scope of review, and that the scope of review could provide for in-country reviews to be optional, while such flexibilities shall be reflected in the development of modalities, procedures and guidelines referred to in paragraph 91 below;

90. *Also decides* that all Parties, except for the least developed country Parties and small island developing States, shall submit the information referred to in Article 13, paragraphs 7, 8, 9 and 10, of the Agreement, as appropriate, no less frequently than on a biennial basis, and that the least developed country Parties and small island developing States may submit this information at their discretion;

91. *Requests* the Ad Hoc Working Group on the Paris Agreement to develop recommendations for modalities, procedures and guidelines in accordance with Article 13, paragraph 13, of the Agreement, and to define the year of their first and subsequent review and update, as appropriate, at regular intervals, for consideration by the Conference of the Parties, at its twenty-fourth session, with a view to forwarding them to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement for consideration and adoption at its first session;

92. *Also requests* the Ad Hoc Working Group on the Paris Agreement, in developing the recommendations for the modalities, procedures and guidelines referred to in paragraph 91 above, to take into account, inter alia:

(a) The importance of facilitating improved reporting and transparency over time;

(b) The need to provide flexibility to those developing country Parties that need it in the light of their capacities;

(c) The need to promote transparency, accuracy, completeness, consistency and comparability;

(d) The need to avoid duplication as well as undue burden on Parties and the secretariat;

(e) The need to ensure that Parties maintain at least the frequency and quality of reporting in accordance with their respective obligations under the Convention;

(f) The need to ensure that double counting is avoided;

(g) The need to ensure environmental integrity;

93. *Further requests* the Ad Hoc Working Group on the Paris Agreement, in developing the modalities, procedures and guidelines referred to in paragraph 91 above, to draw on the experiences from and take into account other ongoing relevant processes under the Convention;

94. *Requests* the Ad Hoc Working Group on the Paris Agreement, in developing the modalities, procedures and guidelines referred to in paragraph 91 above, to consider, inter alia:

(a) The types of flexibility available to those developing country Parties that need it on the basis of their capacities;

(b) The consistency between the methodology communicated in the nationally determined contribution and the methodology for reporting on progress made towards achieving individual Parties' respective nationally determined contribution;

(c) That Parties report information on adaptation action and planning including, if appropriate**,** their national adaptation plans, with a view to collectively exchanging information and sharing lessons learned;

(d) Support provided, enhancing delivery of support for both adaptation and mitigation through, inter alia, the common tabular formats for reporting support, and taking into account issues considered by the Subsidiary Body for Scientific and Technological Advice on methodologies for reporting on financial information, and enhancing the reporting by developing country Parties on support received, including the use, impact and estimated results thereof;

(e) Information in the biennial assessments and other reports of the Standing Committee on Finance and other relevant bodies under the Convention;

(f) Information on the social and economic impact of response measures;

95. *Also requests* the Ad Hoc Working Group on the Paris Agreement, in developing recommendations for the modalities, procedures and guidelines referred to in paragraph 91 above, to enhance the transparency of support provided in accordance with Article 9 of the Agreement;

96. *Further requests* the Ad Hoc Working Group on the Paris Agreement to report on the progress of work on the modalities, procedures and guidelines referred to in paragraph 91 above to future sessions of the Conference of the Parties, and that this work be concluded no later than 2018;

97. *Decides* that the modalities, procedures and guidelines developed under paragraph 91 above shall be applied upon the entry into force of the Paris Agreement;

98. *Also decides* that the modalities, procedures and guidelines of this transparency framework shall build upon and eventually supersede the measurement, reporting and verification system established by decision 1/CP.16, paragraphs 40–47 and 60–64, and decision 2/CP.17, paragraphs 12–62, immediately following the submission of the final biennial reports and biennial update reports;

Global stocktake

99. *Requests* the Ad Hoc Working Group on the Paris Agreement to identify the sources of input for the global stocktake referred to in Article 14 of the Agreement and to report to the Conference of the Parties, with a view to the Conference of the Parties making a recommendation to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement for consideration and adoption at its first session, including, but not limited to:

(a) Information on:

(i) The overall effect of the nationally determined contributions communicated by Parties;

(ii) The state of adaptation efforts, support, experiences and priorities from the communications referred to in Article 7, paragraphs 10 and 11, of the Agreement, and reports referred to in Article 13, paragraph 8, of the Agreement;

(iii) The mobilization and provision of support;

(b) The latest reports of the Intergovernmental Panel on Climate Change;

(c) Reports of the subsidiary bodies;

100. *Also requests* the Subsidiary Body for Scientific and Technological Advice to provide advice on how the assessments of the Intergovernmental Panel on Climate Change can inform the global stocktake of the implementation of the Agreement pursuant to its Article 14 and to report on this matter to the Ad Hoc Working Group on the Paris Agreement at its second session;

101. *Further requests* the Ad Hoc Working Group on the Paris Agreement to develop modalities for the global stocktake referred to in Article 14 of the Agreement and to report to the Conference of the Parties, with a view to the Conference of the Parties making a recommendation to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement for consideration and adoption at its first session;

Facilitating implementation and compliance

102. *Decides* that the committee referred to in Article 15, paragraph 2, of the Agreement shall consist of 12 members with recognized competence in relevant scientific, technical, socioeconomic or legal fields, to be elected by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement on the basis of equitable geographical representation, with two members each from the five regional groups of the United Nations and one member each from the small island developing States and the least developed countries, while taking into account the goal of gender balance;

103. *Requests* the Ad Hoc Working Group on the Paris Agreement to develop the modalities and procedures for the effective operation of the committee referred to in Article 15, paragraph 2, of the Agreement, with a view to the Ad Hoc Working Group on the Paris Agreement completing its work on such modalities and procedures for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session;

Final clauses

104. *Also requests* the secretariat, solely for the purposes of Article 21 of the Agreement, to make available on its website on the date of adoption of the Agreement as well as in the report of the Conference of the Parties on its twenty-first session, information on the most up-to-date total and per cent of greenhouse gas emissions communicated by Parties to the Convention in their national communications, greenhouse gas inventory reports, biennial reports or biennial update reports;

IV. Enhanced action prior to 2020

105. *Resolves* to ensure the highest possible mitigation efforts in the pre-2020 period, including by:

(a) Urging all Parties to the Kyoto Protocol that have not already done so to ratify and implement the Doha Amendment to the Kyoto Protocol;

(b) Urging all Parties that have not already done so to make and implement a mitigation pledge under the Cancun Agreements;

(c) Reiterating its resolve, as set out in decision 1/CP.19, paragraphs 3 and 4, to accelerate the full implementation of the decisions constituting the agreed outcome pursuant to decision 1/CP.13 and enhance ambition in the pre-2020 period in order to ensure the highest possible mitigation efforts under the Convention by all Parties;

(d) Inviting developing country Parties that have not submitted their first biennial update reports to do so as soon as possible;

(e) Urging all Parties to participate in the existing measurement, reporting and verification processes under the Cancun Agreements, in a timely manner, with a view to demonstrating progress made in the implementation of their mitigation pledges;

106. *Encourages* Parties to promote the voluntary cancellation by Party and non-Party stakeholders, without double counting, of units issued under the Kyoto Protocol, including certified emission reductions that are valid for the second commitment period;

107. *Urges* host and purchasing Parties to report transparently on internationally transferred mitigation outcomes, including outcomes used to meet international pledges, and emission units issued under the Kyoto Protocol with a view to promoting environmental integrity and avoiding double counting;

108. *Recognizes* the social, economic and environmental value of voluntary mitigation actions and their co-benefits for adaptation, health and sustainable development;

109. *Resolves* to strengthen, in the period 2016–2020, the existing technical examination process on mitigation as defined in decision 1/CP.19, paragraph 5(a), and decision 1/CP.20, paragraph 19, taking into account the latest scientific knowledge, including by:

(a) Encouraging Parties, Convention bodies and international organizations to engage in this process, including, as appropriate, in cooperation with relevant non-Party stakeholders, to share their experiences and suggestions, including from regional events, and to cooperate in facilitating the implementation of policies, practices and actions identified during this process in accordance with national sustainable development priorities;

(b) Striving to improve, in consultation with Parties, access to and participation in this process by developing country Party and non-Party experts;

(c) Requesting the Technology Executive Committee and the Climate Technology Centre and Network in accordance with their respective mandates:

(i) To engage in the technical expert meetings and enhance their efforts to facilitate and support Parties in scaling up the implementation of policies, practices and actions identified during this process;

(ii) To provide regular updates during the technical expert meetings on the progress made in facilitating the implementation of policies, practices and actions previously identified during this process;

(iii) To include information on their activities under this process in their joint annual report to the Conference of the Parties;

(d) Encouraging Parties to make effective use of the Climate Technology Centre and Network to obtain assistance to develop economically, environmentally and socially viable project proposals in the high mitigation potential areas identified in this process;

110. *Encourages* the operating entities of the Financial Mechanism of the Convention to engage in the technical expert meetings and to inform participants of their contribution to facilitating progress in the implementation of policies, practices and actions identified during the technical examination process;

111. *Requests* the secretariat to organize the process referred to in paragraph 109 above and disseminate its results, including by:

(a) Organizing, in consultation with the Technology Executive Committee and relevant expert organizations, regular technical expert meetings focusing on specific policies, practices and actions representing best practices and with the potential to be scalable and replicable;

(b) Updating, on an annual basis, following the meetings referred to in paragraph 111(a) above and in time to serve as input to the summary for policymakers referred to in paragraph 111(c) below, a technical paper on the mitigation benefits and co-benefits of policies, practices and actions for enhancing mitigation ambition, as well as on options for supporting their implementation, information on which should be made available in a user-friendly online format;

(c) Preparing, in consultation with the champions referred to in paragraph 121 below, a summary for policymakers, with information on specific policies, practices and actions representing best practices and with the potential to be scalable and replicable, and on options to support their implementation, as well as on relevant collaborative initiatives, and publishing the summary at least two months in advance of each session of the Conference of the Parties as input for the high-level event referred to in paragraph 120 below;

112. *Decides* that the process referred to in paragraph 109 above should be organized jointly by the Subsidiary Body for Implementation and the Subsidiary Body for Scientific and Technological Advice and should take place on an ongoing basis until 2020;

113. *Also decides* to conduct in 2017 an assessment of the process referred to in paragraph 109 above so as to improve its effectiveness;

114. *Resolves* to enhance the provision of urgent and adequate finance, technology and capacity-building support by developed country Parties in order to enhance the level of ambition of pre-2020 action by Parties, and in this regard *strongly urges* developed country Parties to scale up their level of financial support, with a concrete road map to achieve the goal of jointly providing USD 100 billion annually by 2020 for mitigation and adaptation while significantly increasing adaptation finance from current levels and to further provide appropriate technology and capacity-building support;

115. *Decides* to conduct a facilitative dialogue in conjunction with the twenty-second session of the Conference of the Parties to assess the progress in implementing decision 1/CP.19, paragraphs 3 and 4, and identify relevant opportunities to enhance the provision of financial resources, including for technology development and transfer, and capacity-building support, with a view to identifying ways to enhance the ambition of mitigation efforts by all Parties, including identifying relevant opportunities to enhance the provision and mobilization of support and enabling environments;

116. *Acknowledges* with appreciation the results of the Lima-Paris Action Agenda, which build on the climate summit convened on 23 September 2014 by the Secretary-General of the United Nations;

117. *Welcomes* the efforts of non-Party stakeholders to scale up their climate actions, and *encourages* the registration of those actions in the Non-State Actor Zone for Climate Action platform;[3]

118. *Encourages* Parties to work closely with non-Party stakeholders to catalyse efforts to strengthen mitigation and adaptation action;

119. *Also encourages* non-Party stakeholders to increase their engagement in the processes referred to in paragraph 109 above and paragraph 124 below;

120. *Agrees* to convene, pursuant to decision 1/CP.20, paragraph 21, building on the Lima-Paris Action Agenda and in conjunction with each session of the Conference of the Parties during the period 2016–2020, a high-level event that:

(a) Further strengthens high-level engagement on the implementation of policy options and actions arising from the processes referred to in paragraph 109 above and paragraph 124 below, drawing on the summary for policymakers referred to in paragraph 111(c) above;

(b) Provides an opportunity for announcing new or strengthened voluntary efforts, initiatives and coalitions, including the implementation of policies, practices and actions arising from the processes referred to in paragraph 109 above and paragraph 124

[3] <http://climateaction.unfccc.int/>.

below and presented in the summary for policymakers referred to in paragraph 111(c) above;

(c) Takes stock of related progress and recognizes new or strengthened voluntary efforts, initiatives and coalitions;

(d) Provides meaningful and regular opportunities for the effective high-level engagement of dignitaries of Parties, international organizations, international cooperative initiatives and non-Party stakeholders;

121. *Decides* that two high-level champions shall be appointed to act on behalf of the President of the Conference of the Parties to facilitate through strengthened high-level engagement in the period 2016–2020 the successful execution of existing efforts and the scaling-up and introduction of new or strengthened voluntary efforts, initiatives and coalitions, including by:

(a) Working with the Executive Secretary and the current and incoming Presidents of the Conference of the Parties to coordinate the annual high-level event referred to in paragraph 120 above;

(b) Engaging with interested Parties and non-Party stakeholders, including to further the voluntary initiatives of the Lima-Paris Action Agenda;

(c) Providing guidance to the secretariat on the organization of technical expert meetings referred to in paragraph 111(a) above and paragraph 129(a) below;

122. *Also decides* that the high-level champions referred to in paragraph 121 above should normally serve for a term of two years, with their terms overlapping for a full year to ensure continuity, such that:

(a) The President of the twenty-first session of the Conference of the Parties should appoint one champion, who should serve for one year from the date of the appointment until the last day of the twenty-second session of the Conference of the Parties;

(b) The President of the twenty-second session of the Conference of the Parties should appoint one champion who should serve for two years from the date of the appointment until the last day of the twenty-third session of the Conference of the Parties (November 2017);

(c) Thereafter, each subsequent President of the Conference of the Parties should appoint one champion who should serve for two years and succeed the previously appointed champion whose term has ended;

123. *Invites* all interested Parties and relevant organizations to provide support for the work of the champions referred to in paragraph 121 above;

124. *Decides* to launch, in the period 2016–2020, a technical examination process on adaptation;

125. *Also decides* that the process referred to in paragraph 124 above will endeavour to identify concrete opportunities for strengthening resilience, reducing vulnerabilities and increasing the understanding and implementation of adaptation actions;

126. *Further decides* that the process referred to in paragraph 124 above should be organized jointly by the Subsidiary Body for Implementation and the Subsidiary Body for Scientific and Technological Advice, and conducted by the Adaptation Committee;

127. *Decides* that the process referred to in paragraph 124 above will be pursued by:

(a) Facilitating the sharing of good practices, experiences and lessons learned;

(b) Identifying actions that could significantly enhance the implementation of adaptation actions, including actions that could enhance economic diversification and have mitigation co-benefits;

(c) Promoting cooperative action on adaptation;

(d) Identifying opportunities to strengthen enabling environments and enhance the provision of support for adaptation in the context of specific policies, practices and actions;

128. *Also decides* that the technical examination process on adaptation referred to in paragraph 124 above will take into account the process, modalities, outputs, outcomes and lessons learned from the technical examination process on mitigation referred to in paragraph 109 above;

129. *Requests* the secretariat to support the process referred to in paragraph 124 above by:

(a) Organizing regular technical expert meetings focusing on specific policies, strategies and actions;

(b) Preparing annually, on the basis of the meetings referred to in paragraph 129(a) above and in time to serve as an input to the summary for policymakers referred to in paragraph 111(c) above, a technical paper on opportunities to enhance adaptation action, as well as options to support their implementation, information on which should be made available in a user-friendly online format;

130. *Decides* that in conducting the process referred to in paragraph 124 above, the Adaptation Committee will engage with and explore ways to take into account, synergize with and build on the existing arrangements for adaptation-related work programmes, bodies and institutions under the Convention so as to ensure coherence and maximum value;

131. *Also decides* to conduct, in conjunction with the assessment referred to in paragraph 113 above, an assessment of the process referred to in paragraph 124 above, so as to improve its effectiveness;

132. *Invites* Parties and observer organizations to submit information on the opportunities referred to in paragraph 125 above by 3 February 2016;

V. Non-Party stakeholders

133. *Welcomes* the efforts of all non-Party stakeholders to address and respond to climate change, including those of civil society, the private sector, financial institutions, cities and other subnational authorities;

134. *Invites* the non-Party stakeholders referred to in paragraph 133 above to scale up their efforts and support actions to reduce emissions and/or to build resilience and decrease vulnerability to the adverse effects of climate change and demonstrate these efforts via the Non-State Actor Zone for Climate Action platform[4] referred to in paragraph 117 above;

135. *Recognizes* the need to strengthen knowledge, technologies, practices and efforts of local communities and indigenous peoples related to addressing and responding to climate change, and *establishes* a platform for the exchange of experiences and sharing of best practices on mitigation and adaptation in a holistic and integrated manner;

[4] <http://climateaction.unfccc.int/>.

136. *Also recognizes* the important role of providing incentives for emission reduction activities, including tools such as domestic policies and carbon pricing;

VI. Administrative and budgetary matters

137. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in this decision and *requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources;

138. *Emphasizes* the urgency of making additional resources available for the implementation of the relevant actions, including actions referred to in this decision, and the implementation of the work programme referred to in paragraph 9 above;

139. *Urges* Parties to make voluntary contributions for the timely implementation of this decision.

Annex

Paris Agreement

The Parties to this Agreement,

Being Parties to the United Nations Framework Convention on Climate Change, hereinafter referred to as "the Convention",

Pursuant to the Durban Platform for Enhanced Action established by decision 1/CP.17 of the Conference of the Parties to the Convention at its seventeenth session,

In pursuit of the objective of the Convention, and being guided by its principles, including the principle of equity and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances,

Recognizing the need for an effective and progressive response to the urgent threat of climate change on the basis of the best available scientific knowledge,

Also recognizing the specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, as provided for in the Convention,

Taking full account of the specific needs and special situations of the least developed countries with regard to funding and transfer of technology,

Recognizing that Parties may be affected not only by climate change, but also by the impacts of the measures taken in response to it,

Emphasizing the intrinsic relationship that climate change actions, responses and impacts have with equitable access to sustainable development and eradication of poverty,

Recognizing the fundamental priority of safeguarding food security and ending hunger, and the particular vulnerabilities of food production systems to the adverse impacts of climate change,

Taking into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities,

Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity,

Recognizing the importance of the conservation and enhancement, as appropriate, of sinks and reservoirs of the greenhouse gases referred to in the Convention,

Noting the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity, recognized by some cultures as Mother Earth, and noting the importance for some of the concept of "climate justice", when taking action to address climate change,

Affirming the importance of education, training, public awareness, public participation, public access to information and cooperation at all levels on the matters addressed in this Agreement,

Recognizing the importance of the engagements of all levels of government and various actors, in accordance with respective national legislations of Parties, in addressing climate change,

Also recognizing that sustainable lifestyles and sustainable patterns of consumption and production, with developed country Parties taking the lead, play an important role in addressing climate change,

Have agreed as follows:

Article 1

For the purpose of this Agreement, the definitions contained in Article 1 of the Convention shall apply. In addition:

(a) "Convention" means the United Nations Framework Convention on Climate Change, adopted in New York on 9 May 1992;

(b) "Conference of the Parties" means the Conference of the Parties to the Convention;

(c) "Party" means a Party to this Agreement.

Article 2

1. This Agreement, in enhancing the implementation of the Convention, including its objective, aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by:

(a) Holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;

(b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production; and

(c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.

2. This Agreement will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.

Article 3

As nationally determined contributions to the global response to climate change, all Parties are to undertake and communicate ambitious efforts as defined in Articles 4, 7, 9, 10, 11 and 13 with the view to achieving the purpose of this Agreement as set out in Article 2. The efforts of all Parties will represent a progression over time, while recognizing the need to support developing country Parties for the effective implementation of this Agreement.

Article 4

1. In order to achieve the long-term temperature goal set out in Article 2, Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty.

2. Each Party shall prepare, communicate and maintain successive nationally determined contributions that it intends to achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions.

3. Each Party's successive nationally determined contribution will represent a progression beyond the Party's then current nationally determined contribution and reflect its highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.

4. Developed country Parties should continue taking the lead by undertaking economy-wide absolute emission reduction targets. Developing country Parties should continue enhancing their mitigation efforts, and are encouraged to move over time towards economy-wide emission reduction or limitation targets in the light of different national circumstances.

5. Support shall be provided to developing country Parties for the implementation of this Article, in accordance with Articles 9, 10 and 11, recognizing that enhanced support for developing country Parties will allow for higher ambition in their actions.

6. The least developed countries and small island developing States may prepare and communicate strategies, plans and actions for low greenhouse gas emissions development reflecting their special circumstances.

7. Mitigation co-benefits resulting from Parties' adaptation actions and/or economic diversification plans can contribute to mitigation outcomes under this Article.

8. In communicating their nationally determined contributions, all Parties shall provide the information necessary for clarity, transparency and understanding in accordance with decision 1/CP.21 and any relevant decisions of the Conference of the Parties serving as the meeting of the Parties to this Agreement.

9. Each Party shall communicate a nationally determined contribution every five years in accordance with decision 1/CP.21 and any relevant decisions of the Conference of the Parties serving as the meeting of the Parties to this Agreement and be informed by the outcomes of the global stocktake referred to in Article 14.

10. The Conference of the Parties serving as the meeting of the Parties to this Agreement shall consider common time frames for nationally determined contributions at its first session.

11. A Party may at any time adjust its existing nationally determined contribution with a view to enhancing its level of ambition, in accordance with guidance adopted by the Conference of the Parties serving as the meeting of the Parties to this Agreement.

12. Nationally determined contributions communicated by Parties shall be recorded in a public registry maintained by the secretariat.

13. Parties shall account for their nationally determined contributions. In accounting for anthropogenic emissions and removals corresponding to their nationally determined contributions, Parties shall promote environmental integrity, transparency, accuracy, completeness, comparability and consistency, and ensure the avoidance of double counting, in accordance with guidance adopted by the Conference of the Parties serving as the meeting of the Parties to this Agreement.

14. In the context of their nationally determined contributions, when recognizing and implementing mitigation actions with respect to anthropogenic emissions and removals, Parties should take into account, as appropriate, existing methods and guidance under the Convention, in the light of the provisions of paragraph 13 of this Article.

15. Parties shall take into consideration in the implementation of this Agreement the concerns of Parties with economies most affected by the impacts of response measures, particularly developing country Parties.

16. Parties, including regional economic integration organizations and their member States, that have reached an agreement to act jointly under paragraph 2 of this Article shall notify the secretariat of the terms of that agreement, including the emission level allocated to each Party within the relevant time period, when they communicate their nationally determined contributions. The secretariat shall in turn inform the Parties and signatories to the Convention of the terms of that agreement.

17. Each party to such an agreement shall be responsible for its emission level as set out in the agreement referred to in paragraph 16 of this Article in accordance with paragraphs 13 and 14 of this Article and Articles 13 and 15.

18. If Parties acting jointly do so in the framework of, and together with, a regional economic integration organization which is itself a Party to this Agreement, each member State of that regional economic integration organization individually, and together with the regional economic integration organization, shall be responsible for its emission level as set out in the agreement communicated under paragraph 16 of this Article in accordance with paragraphs 13 and 14 of this Article and Articles 13 and 15.

19. All Parties should strive to formulate and communicate long-term low greenhouse gas emission development strategies, mindful of Article 2 taking into account their common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.

Article 5

1. Parties should take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases as referred to in Article 4, paragraph 1(d), of the Convention, including forests.

2. Parties are encouraged to take action to implement and support, including through results-based payments, the existing framework as set out in related guidance and decisions already agreed under the Convention for: policy approaches and positive incentives for activities relating to reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries; and alternative policy approaches, such as joint mitigation and adaptation approaches for the integral and sustainable management of forests, while reaffirming the importance of incentivizing, as appropriate, non-carbon benefits associated with such approaches.

Article 6

1. Parties recognize that some Parties choose to pursue voluntary cooperation in the implementation of their nationally determined contributions to allow for higher ambition in their mitigation and adaptation actions and to promote sustainable development and environmental integrity.

2. Parties shall, where engaging on a voluntary basis in cooperative approaches that involve the use of internationally transferred mitigation outcomes towards nationally determined contributions, promote sustainable development and ensure environmental integrity and transparency, including in governance, and shall apply robust accounting to ensure, inter alia, the avoidance of double counting, consistent with guidance adopted by the Conference of the Parties serving as the meeting of the Parties to this Agreement.

3. The use of internationally transferred mitigation outcomes to achieve nationally determined contributions under this Agreement shall be voluntary and authorized by participating Parties.

4. A mechanism to contribute to the mitigation of greenhouse gas emissions and support sustainable development is hereby established under the authority and guidance of the Conference of the Parties serving as the meeting of the Parties to this Agreement for use by Parties on a voluntary basis. It shall be supervised by a body designated by the Conference of the Parties serving as the meeting of the Parties to this Agreement, and shall aim:

(a) To promote the mitigation of greenhouse gas emissions while fostering sustainable development;

(b) To incentivize and facilitate participation in the mitigation of greenhouse gas emissions by public and private entities authorized by a Party;

(c) To contribute to the reduction of emission levels in the host Party, which will benefit from mitigation activities resulting in emission reductions that can also be used by another Party to fulfil its nationally determined contribution; and

(d) To deliver an overall mitigation in global emissions.

5. Emission reductions resulting from the mechanism referred to in paragraph 4 of this Article shall not be used to demonstrate achievement of the host Party's nationally determined contribution if used by another Party to demonstrate achievement of its nationally determined contribution.

6. The Conference of the Parties serving as the meeting of the Parties to this Agreement shall ensure that a share of the proceeds from activities under the mechanism referred to in paragraph 4 of this Article is used to cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.

7. The Conference of the Parties serving as the meeting of the Parties to this Agreement shall adopt rules, modalities and procedures for the mechanism referred to in paragraph 4 of this Article at its first session.

8. Parties recognize the importance of integrated, holistic and balanced non-market approaches being available to Parties to assist in the implementation of their nationally determined contributions, in the context of sustainable development and poverty eradication, in a coordinated and effective manner, including through, inter alia, mitigation, adaptation, finance, technology transfer and capacity-building, as appropriate. These approaches shall aim to:

(a) Promote mitigation and adaptation ambition;

(b) Enhance public and private sector participation in the implementation of nationally determined contributions; and

(c) Enable opportunities for coordination across instruments and relevant institutional arrangements.

9. A framework for non-market approaches to sustainable development is hereby defined to promote the non-market approaches referred to in paragraph 8 of this Article.

Article 7

1. Parties hereby establish the global goal on adaptation of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with a view

to contributing to sustainable development and ensuring an adequate adaptation response in the context of the temperature goal referred to in Article 2.

2. Parties recognize that adaptation is a global challenge faced by all with local, subnational, national, regional and international dimensions, and that it is a key component of and makes a contribution to the long-term global response to climate change to protect people, livelihoods and ecosystems, taking into account the urgent and immediate needs of those developing country Parties that are particularly vulnerable to the adverse effects of climate change.

3. The adaptation efforts of developing country Parties shall be recognized, in accordance with the modalities to be adopted by the Conference of the Parties serving as the meeting of the Parties to this Agreement at its first session.

4. Parties recognize that the current need for adaptation is significant and that greater levels of mitigation can reduce the need for additional adaptation efforts, and that greater adaptation needs can involve greater adaptation costs.

5. Parties acknowledge that adaptation action should follow a country-driven, gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems, and should be based on and guided by the best available science and, as appropriate, traditional knowledge, knowledge of indigenous peoples and local knowledge systems, with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions, where appropriate.

6. Parties recognize the importance of support for and international cooperation on adaptation efforts and the importance of taking into account the needs of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change.

7. Parties should strengthen their cooperation on enhancing action on adaptation, taking into account the Cancun Adaptation Framework, including with regard to:

(a) Sharing information, good practices, experiences and lessons learned, including, as appropriate, as these relate to science, planning, policies and implementation in relation to adaptation actions;

(b) Strengthening institutional arrangements, including those under the Convention that serve this Agreement, to support the synthesis of relevant information and knowledge, and the provision of technical support and guidance to Parties;

(c) Strengthening scientific knowledge on climate, including research, systematic observation of the climate system and early warning systems, in a manner that informs climate services and supports decision-making;

(d) Assisting developing country Parties in identifying effective adaptation practices, adaptation needs, priorities, support provided and received for adaptation actions and efforts, and challenges and gaps, in a manner consistent with encouraging good practices; and

(e) Improving the effectiveness and durability of adaptation actions.

8. United Nations specialized organizations and agencies are encouraged to support the efforts of Parties to implement the actions referred to in paragraph 7 of this Article, taking into account the provisions of paragraph 5 of this Article.

9. Each Party shall, as appropriate, engage in adaptation planning processes and the implementation of actions, including the development or enhancement of relevant plans, policies and/or contributions, which may include:

(a) The implementation of adaptation actions, undertakings and/or efforts;

(b) The process to formulate and implement national adaptation plans;

(c) The assessment of climate change impacts and vulnerability, with a view to formulating nationally determined prioritized actions, taking into account vulnerable people, places and ecosystems;

(d) Monitoring and evaluating and learning from adaptation plans, policies, programmes and actions; and

(e) Building the resilience of socioeconomic and ecological systems, including through economic diversification and sustainable management of natural resources.

10. Each Party should, as appropriate, submit and update periodically an adaptation communication, which may include its priorities, implementation and support needs, plans and actions, without creating any additional burden for developing country Parties.

11. The adaptation communication referred to in paragraph 10 of this Article shall be, as appropriate, submitted and updated periodically, as a component of or in conjunction with other communications or documents, including a national adaptation plan, a nationally determined contribution as referred to in Article 4, paragraph 2, and/or a national communication.

12. The adaptation communications referred to in paragraph 10 of this Article shall be recorded in a public registry maintained by the secretariat.

13. Continuous and enhanced international support shall be provided to developing country Parties for the implementation of paragraphs 7, 9, 10 and 11 of this Article, in accordance with the provisions of Articles 9, 10 and 11.

14. The global stocktake referred to in Article 14 shall, inter alia:

(a) Recognize adaptation efforts of developing country Parties;

(b) Enhance the implementation of adaptation action taking into account the adaptation communication referred to in paragraph 10 of this Article;

(c) Review the adequacy and effectiveness of adaptation and support provided for adaptation; and

(d) Review the overall progress made in achieving the global goal on adaptation referred to in paragraph 1 of this Article.

Article 8

1. Parties recognize the importance of averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events, and the role of sustainable development in reducing the risk of loss and damage.

2. The Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts shall be subject to the authority and guidance of the Conference of the Parties serving as the meeting of the Parties to this Agreement and may be enhanced and strengthened, as determined by the Conference of the Parties serving as the meeting of the Parties to this Agreement.

3. Parties should enhance understanding, action and support, including through the Warsaw International Mechanism, as appropriate, on a cooperative and facilitative basis with respect to loss and damage associated with the adverse effects of climate change.

4. Accordingly, areas of cooperation and facilitation to enhance understanding, action and support may include:

(a) Early warning systems;

(b) Emergency preparedness;

(c) Slow onset events;

(d) Events that may involve irreversible and permanent loss and damage;

(e) Comprehensive risk assessment and management;

(f) Risk insurance facilities, climate risk pooling and other insurance solutions;

(g) Non-economic losses; and

(h) Resilience of communities, livelihoods and ecosystems.

5. The Warsaw International Mechanism shall collaborate with existing bodies and expert groups under the Agreement, as well as relevant organizations and expert bodies outside the Agreement.

Article 9

1. Developed country Parties shall provide financial resources to assist developing country Parties with respect to both mitigation and adaptation in continuation of their existing obligations under the Convention.

2. Other Parties are encouraged to provide or continue to provide such support voluntarily.

3. As part of a global effort, developed country Parties should continue to take the lead in mobilizing climate finance from a wide variety of sources, instruments and channels, noting the significant role of public funds, through a variety of actions, including supporting country-driven strategies, and taking into account the needs and priorities of developing country Parties. Such mobilization of climate finance should represent a progression beyond previous efforts.

4. The provision of scaled-up financial resources should aim to achieve a balance between adaptation and mitigation, taking into account country-driven strategies, and the priorities and needs of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change and have significant capacity constraints, such as the least developed countries and small island developing States, considering the need for public and grant-based resources for adaptation.

5. Developed country Parties shall biennially communicate indicative quantitative and qualitative information related to paragraphs 1 and 3 of this Article, as applicable, including, as available, projected levels of public financial resources to be provided to developing country Parties. Other Parties providing resources are encouraged to communicate biennially such information on a voluntary basis.

6. The global stocktake referred to in Article 14 shall take into account the relevant information provided by developed country Parties and/or Agreement bodies on efforts related to climate finance.

7. Developed country Parties shall provide transparent and consistent information on support for developing country Parties provided and mobilized through public interventions biennially in accordance with the modalities, procedures and guidelines to be adopted by the Conference of the Parties serving as the meeting of the Parties to this Agreement, at its

first session, as stipulated in Article 13, paragraph 13. Other Parties are encouraged to do so.

8. The Financial Mechanism of the Convention, including its operating entities, shall serve as the financial mechanism of this Agreement.

9. The institutions serving this Agreement, including the operating entities of the Financial Mechanism of the Convention, shall aim to ensure efficient access to financial resources through simplified approval procedures and enhanced readiness support for developing country Parties, in particular for the least developed countries and small island developing States, in the context of their national climate strategies and plans.

Article 10

1. Parties share a long-term vision on the importance of fully realizing technology development and transfer in order to improve resilience to climate change and to reduce greenhouse gas emissions.

2. Parties, noting the importance of technology for the implementation of mitigation and adaptation actions under this Agreement and recognizing existing technology deployment and dissemination efforts, shall strengthen cooperative action on technology development and transfer.

3. The Technology Mechanism established under the Convention shall serve this Agreement.

4. A technology framework is hereby established to provide overarching guidance to the work of the Technology Mechanism in promoting and facilitating enhanced action on technology development and transfer in order to support the implementation of this Agreement, in pursuit of the long-term vision referred to in paragraph 1 of this Article.

5. Accelerating, encouraging and enabling innovation is critical for an effective, long-term global response to climate change and promoting economic growth and sustainable development. Such effort shall be, as appropriate, supported, including by the Technology Mechanism and, through financial means, by the Financial Mechanism of the Convention, for collaborative approaches to research and development, and facilitating access to technology, in particular for early stages of the technology cycle, to developing country Parties.

6. Support, including financial support, shall be provided to developing country Parties for the implementation of this Article, including for strengthening cooperative action on technology development and transfer at different stages of the technology cycle, with a view to achieving a balance between support for mitigation and adaptation. The global stocktake referred to in Article 14 shall take into account available information on efforts related to support on technology development and transfer for developing country Parties.

Article 11

1. Capacity-building under this Agreement should enhance the capacity and ability of developing country Parties, in particular countries with the least capacity, such as the least developed countries, and those that are particularly vulnerable to the adverse effects of climate change, such as small island developing States, to take effective climate change action, including, inter alia, to implement adaptation and mitigation actions, and should facilitate technology development, dissemination and deployment, access to climate finance, relevant aspects of education, training and public awareness, and the transparent, timely and accurate communication of information.

2. Capacity-building should be country-driven, based on and responsive to national needs, and foster country ownership of Parties, in particular, for developing country Parties,

including at the national, subnational and local levels. Capacity-building should be guided by lessons learned, including those from capacity-building activities under the Convention, and should be an effective, iterative process that is participatory, cross-cutting and gender-responsive.

3. All Parties should cooperate to enhance the capacity of developing country Parties to implement this Agreement. Developed country Parties should enhance support for capacity-building actions in developing country Parties.

4. All Parties enhancing the capacity of developing country Parties to implement this Agreement, including through regional, bilateral and multilateral approaches, shall regularly communicate on these actions or measures on capacity-building. Developing country Parties should regularly communicate progress made on implementing capacity-building plans, policies, actions or measures to implement this Agreement.

5. Capacity-building activities shall be enhanced through appropriate institutional arrangements to support the implementation of this Agreement, including the appropriate institutional arrangements established under the Convention that serve this Agreement. The Conference of the Parties serving as the meeting of the Parties to this Agreement shall, at its first session, consider and adopt a decision on the initial institutional arrangements for capacity-building.

Article 12

Parties shall cooperate in taking measures, as appropriate, to enhance climate change education, training, public awareness, public participation and public access to information, recognizing the importance of these steps with respect to enhancing actions under this Agreement.

Article 13

1. In order to build mutual trust and confidence and to promote effective implementation, an enhanced transparency framework for action and support, with built-in flexibility which takes into account Parties' different capacities and builds upon collective experience is hereby established.

2. The transparency framework shall provide flexibility in the implementation of the provisions of this Article to those developing country Parties that need it in the light of their capacities. The modalities, procedures and guidelines referred to in paragraph 13 of this Article shall reflect such flexibility.

3. The transparency framework shall build on and enhance the transparency arrangements under the Convention, recognizing the special circumstances of the least developed countries and small island developing States, and be implemented in a facilitative, non-intrusive, non-punitive manner, respectful of national sovereignty, and avoid placing undue burden on Parties.

4. The transparency arrangements under the Convention, including national communications, biennial reports and biennial update reports, international assessment and review and international consultation and analysis, shall form part of the experience drawn upon for the development of the modalities, procedures and guidelines under paragraph 13 of this Article.

5. The purpose of the framework for transparency of action is to provide a clear understanding of climate change action in the light of the objective of the Convention as set out in its Article 2, including clarity and tracking of progress towards achieving Parties' individual nationally determined contributions under Article 4, and Parties' adaptation

actions under Article 7, including good practices, priorities, needs and gaps, to inform the global stocktake under Article 14.

6. The purpose of the framework for transparency of support is to provide clarity on support provided and received by relevant individual Parties in the context of climate change actions under Articles 4, 7, 9, 10 and 11, and, to the extent possible, to provide a full overview of aggregate financial support provided, to inform the global stocktake under Article 14.

7. Each Party shall regularly provide the following information:

(a) A national inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases, prepared using good practice methodologies accepted by the Intergovernmental Panel on Climate Change and agreed upon by the Conference of the Parties serving as the meeting of the Parties to this Agreement; and

(b) Information necessary to track progress made in implementing and achieving its nationally determined contribution under Article 4.

8. Each Party should also provide information related to climate change impacts and adaptation under Article 7, as appropriate.

9. Developed country Parties shall, and other Parties that provide support should, provide information on financial, technology transfer and capacity-building support provided to developing country Parties under Articles 9, 10 and 11.

10. Developing country Parties should provide information on financial, technology transfer and capacity-building support needed and received under Articles 9, 10 and 11.

11. Information submitted by each Party under paragraphs 7 and 9 of this Article shall undergo a technical expert review, in accordance with decision 1/CP.21. For those developing country Parties that need it in the light of their capacities, the review process shall include assistance in identifying capacity-building needs. In addition, each Party shall participate in a facilitative, multilateral consideration of progress with respect to efforts under Article 9, and its respective implementation and achievement of its nationally determined contribution.

12. The technical expert review under this paragraph shall consist of a consideration of the Party's support provided, as relevant, and its implementation and achievement of its nationally determined contribution. The review shall also identify areas of improvement for the Party, and include a review of the consistency of the information with the modalities, procedures and guidelines referred to in paragraph 13 of this Article, taking into account the flexibility accorded to the Party under paragraph 2 of this Article. The review shall pay particular attention to the respective national capabilities and circumstances of developing country Parties.

13. The Conference of the Parties serving as the meeting of the Parties to this Agreement shall, at its first session, building on experience from the arrangements related to transparency under the Convention, and elaborating on the provisions in this Article, adopt common modalities, procedures and guidelines, as appropriate, for the transparency of action and support.

14. Support shall be provided to developing countries for the implementation of this Article.

15. Support shall also be provided for the building of transparency-related capacity of developing country Parties on a continuous basis.

Article 14

1. The Conference of the Parties serving as the meeting of the Parties to this Agreement shall periodically take stock of the implementation of this Agreement to assess the collective progress towards achieving the purpose of this Agreement and its long-term goals (referred to as the "global stocktake"). It shall do so in a comprehensive and facilitative manner, considering mitigation, adaptation and the means of implementation and support, and in the light of equity and the best available science.

2. The Conference of the Parties serving as the meeting of the Parties to this Agreement shall undertake its first global stocktake in 2023 and every five years thereafter unless otherwise decided by the Conference of the Parties serving as the meeting of the Parties to this Agreement.

3. The outcome of the global stocktake shall inform Parties in updating and enhancing, in a nationally determined manner, their actions and support in accordance with the relevant provisions of this Agreement, as well as in enhancing international cooperation for climate action.

Article 15

1. A mechanism to facilitate implementation of and promote compliance with the provisions of this Agreement is hereby established.

2. The mechanism referred to in paragraph 1 of this Article shall consist of a committee that shall be expert-based and facilitative in nature and function in a manner that is transparent, non-adversarial and non-punitive. The committee shall pay particular attention to the respective national capabilities and circumstances of Parties.

3. The committee shall operate under the modalities and procedures adopted by the Conference of the Parties serving as the meeting of the Parties to this Agreement at its first session and report annually to the Conference of the Parties serving as the meeting of the Parties to this Agreement.

Article 16

1. The Conference of the Parties, the supreme body of the Convention, shall serve as the meeting of the Parties to this Agreement.

2. Parties to the Convention that are not Parties to this Agreement may participate as observers in the proceedings of any session of the Conference of the Parties serving as the meeting of the Parties to this Agreement. When the Conference of the Parties serves as the meeting of the Parties to this Agreement, decisions under this Agreement shall be taken only by those that are Parties to this Agreement.

3. When the Conference of the Parties serves as the meeting of the Parties to this Agreement, any member of the Bureau of the Conference of the Parties representing a Party to the Convention but, at that time, not a Party to this Agreement, shall be replaced by an additional member to be elected by and from amongst the Parties to this Agreement.

4. The Conference of the Parties serving as the meeting of the Parties to this Agreement shall keep under regular review the implementation of this Agreement and shall make, within its mandate, the decisions necessary to promote its effective implementation. It shall perform the functions assigned to it by this Agreement and shall:

(a) Establish such subsidiary bodies as deemed necessary for the implementation of this Agreement; and

(b) Exercise such other functions as may be required for the implementation of this Agreement.

5. The rules of procedure of the Conference of the Parties and the financial procedures applied under the Convention shall be applied *mutatis mutandis* under this Agreement, except as may be otherwise decided by consensus by the Conference of the Parties serving as the meeting of the Parties to this Agreement.

6. The first session of the Conference of the Parties serving as the meeting of the Parties to this Agreement shall be convened by the secretariat in conjunction with the first session of the Conference of the Parties that is scheduled after the date of entry into force of this Agreement. Subsequent ordinary sessions of the Conference of the Parties serving as the meeting of the Parties to this Agreement shall be held in conjunction with ordinary sessions of the Conference of the Parties, unless otherwise decided by the Conference of the Parties serving as the meeting of the Parties to this Agreement.

7. Extraordinary sessions of the Conference of the Parties serving as the meeting of the Parties to this Agreement shall be held at such other times as may be deemed necessary by the Conference of the Parties serving as the meeting of the Parties to this Agreement or at the written request of any Party, provided that, within six months of the request being communicated to the Parties by the secretariat, it is supported by at least one third of the Parties.

8. The United Nations and its specialized agencies and the International Atomic Energy Agency, as well as any State member thereof or observers thereto not party to the Convention, may be represented at sessions of the Conference of the Parties serving as the meeting of the Parties to this Agreement as observers. Any body or agency, whether national or international, governmental or non-governmental, which is qualified in matters covered by this Agreement and which has informed the secretariat of its wish to be represented at a session of the Conference of the Parties serving as the meeting of the Parties to this Agreement as an observer, may be so admitted unless at least one third of the Parties present object. The admission and participation of observers shall be subject to the rules of procedure referred to in paragraph 5 of this Article.

Article 17

1. The secretariat established by Article 8 of the Convention shall serve as the secretariat of this Agreement.

2. Article 8, paragraph 2, of the Convention on the functions of the secretariat, and Article 8, paragraph 3, of the Convention, on the arrangements made for the functioning of the secretariat, shall apply *mutatis mutandis* to this Agreement. The secretariat shall, in addition, exercise the functions assigned to it under this Agreement and by the Conference of the Parties serving as the meeting of the Parties to this Agreement.

Article 18

1. The Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation established by Articles 9 and 10 of the Convention shall serve, respectively, as the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation of this Agreement. The provisions of the Convention relating to the functioning of these two bodies shall apply *mutatis mutandis* to this Agreement. Sessions of the meetings of the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation of this Agreement shall be held in conjunction with the meetings of, respectively, the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation of the Convention.

2. Parties to the Convention that are not Parties to this Agreement may participate as observers in the proceedings of any session of the subsidiary bodies. When the subsidiary

bodies serve as the subsidiary bodies of this Agreement, decisions under this Agreement shall be taken only by those that are Parties to this Agreement.

3. When the subsidiary bodies established by Articles 9 and 10 of the Convention exercise their functions with regard to matters concerning this Agreement, any member of the bureaux of those subsidiary bodies representing a Party to the Convention but, at that time, not a Party to this Agreement, shall be replaced by an additional member to be elected by and from amongst the Parties to this Agreement.

Article 19

1. Subsidiary bodies or other institutional arrangements established by or under the Convention, other than those referred to in this Agreement, shall serve this Agreement upon a decision of the Conference of the Parties serving as the meeting of the Parties to this Agreement. The Conference of the Parties serving as the meeting of the Parties to this Agreement shall specify the functions to be exercised by such subsidiary bodies or arrangements.

2. The Conference of the Parties serving as the meeting of the Parties to this Agreement may provide further guidance to such subsidiary bodies and institutional arrangements.

Article 20

1. This Agreement shall be open for signature and subject to ratification, acceptance or approval by States and regional economic integration organizations that are Parties to the Convention. It shall be open for signature at the United Nations Headquarters in New York from 22 April 2016 to 21 April 2017. Thereafter, this Agreement shall be open for accession from the day following the date on which it is closed for signature. Instruments of ratification, acceptance, approval or accession shall be deposited with the Depositary.

2. Any regional economic integration organization that becomes a Party to this Agreement without any of its member States being a Party shall be bound by all the obligations under this Agreement. In the case of regional economic integration organizations with one or more member States that are Parties to this Agreement, the organization and its member States shall decide on their respective responsibilities for the performance of their obligations under this Agreement. In such cases, the organization and the member States shall not be entitled to exercise rights under this Agreement concurrently.

3. In their instruments of ratification, acceptance, approval or accession, regional economic integration organizations shall declare the extent of their competence with respect to the matters governed by this Agreement. These organizations shall also inform the Depositary, who shall in turn inform the Parties, of any substantial modification in the extent of their competence.

Article 21

1. This Agreement shall enter into force on the thirtieth day after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55 per cent of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval or accession.

2. Solely for the limited purpose of paragraph 1 of this Article, "total global greenhouse gas emissions" means the most up-to-date amount communicated on or before the date of adoption of this Agreement by the Parties to the Convention.

3. For each State or regional economic integration organization that ratifies, accepts or approves this Agreement or accedes thereto after the conditions set out in paragraph 1 of this Article for entry into force have been fulfilled, this Agreement shall enter into force on the thirtieth day after the date of deposit by such State or regional economic integration organization of its instrument of ratification, acceptance, approval or accession.

4. For the purposes of paragraph 1 of this Article, any instrument deposited by a regional economic integration organization shall not be counted as additional to those deposited by its member States.

Article 22

The provisions of Article 15 of the Convention on the adoption of amendments to the Convention shall apply *mutatis mutandis* to this Agreement.

Article 23

1. The provisions of Article 16 of the Convention on the adoption and amendment of annexes to the Convention shall apply *mutatis mutandis* to this Agreement.

2. Annexes to this Agreement shall form an integral part thereof and, unless otherwise expressly provided for, a reference to this Agreement constitutes at the same time a reference to any annexes thereto. Such annexes shall be restricted to lists, forms and any other material of a descriptive nature that is of a scientific, technical, procedural or administrative character.

Article 24

The provisions of Article 14 of the Convention on settlement of disputes shall apply *mutatis mutandis* to this Agreement.

Article 25

1. Each Party shall have one vote, except as provided for in paragraph 2 of this Article.

2. Regional economic integration organizations, in matters within their competence, shall exercise their right to vote with a number of votes equal to the number of their member States that are Parties to this Agreement. Such an organization shall not exercise its right to vote if any of its member States exercises its right, and vice versa.

Article 26

The Secretary-General of the United Nations shall be the Depositary of this Agreement.

Article 27

No reservations may be made to this Agreement.

Article 28

1. At any time after three years from the date on which this Agreement has entered into force for a Party, that Party may withdraw from this Agreement by giving written notification to the Depositary.

2. Any such withdrawal shall take effect upon expiry of one year from the date of receipt by the Depositary of the notification of withdrawal, or on such later date as may be specified in the notification of withdrawal.

3. Any Party that withdraws from the Convention shall be considered as also having withdrawn from this Agreement.

Article 29

The original of this Agreement, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

DONE at Paris this twelfth day of December two thousand and fifteen.

IN WITNESS WHEREOF, the undersigned, being duly authorized to that effect, have signed this Agreement.

United Nations FCCC/CP/2010/7/Add.1

Framework Convention on Climate Change

Distr.: General
15 March 2011

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Conference of the Parties

Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010

Addendum

Part Two: Action taken by the Conference of the Parties at its sixteenth session

Contents

Decisions adopted by the Conference of the Parties

		Page
Decision		
1/CP.16	The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention	2

Please recycle

Decision 1/CP.16

The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention

The Conference of the Parties,

Recalling its decision 1/CP.13 (the Bali Action Plan) and decision 1/CP.15,

Seeking to secure progress in a balanced manner, with the understanding that, through this decision, not all aspects of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention are concluded, and that nothing in this decision shall prejudge prospects for, or the content of, a legally binding outcome in the future,

Reaffirming the commitment to enable the full, effective and sustained implementation of the Convention through long-term cooperative action, now, up to and beyond 2012, in order to achieve the ultimate objective of the Convention,

Recalling the principles, provisions and commitments set forth in the Convention, in particular its Articles 3 and 4,

Recognizing that climate change represents an urgent and potentially irreversible threat to human societies and the planet, and thus requires to be urgently addressed by all Parties,

Affirming the legitimate needs of developing country Parties for the achievement of sustained economic growth and the eradication of poverty, so as to be able to deal with climate change,

Noting resolution 10/4 of the United Nations Human Rights Council on human rights and climate change, which recognizes that the adverse effects of climate change have a range of direct and indirect implications for the effective enjoyment of human rights and that the effects of climate change will be felt most acutely by those segments of the population that are already vulnerable owing to geography, gender, age, indigenous or minority status, or disability,

I. A shared vision for long-term cooperative action

1. *Affirms* that climate change is one of the greatest challenges of our time and that all Parties share a vision for long-term cooperative action in order to achieve the objective of the Convention under its Article 2, including through the achievement of a global goal, on the basis of equity and in accordance with common but differentiated responsibilities and respective capabilities; this vision is to guide the policies and actions of all Parties, while taking into full consideration the different circumstances of Parties in accordance with the principles and provisions of the Convention; the vision addresses mitigation, adaptation, finance, technology development and transfer, and capacity-building in a balanced, integrated and comprehensive manner to enhance and achieve the full, effective and sustained implementation of the Convention, now, up to and beyond 2012;

2. *Further affirms* that:

(a) Scaled-up overall mitigation efforts that allow for the achievement of desired stabilization levels are necessary, with developed country Parties showing leadership by undertaking ambitious emission reductions and providing technology, capacity-building and financial resources to developing country Parties, in accordance with the relevant provisions of the Convention;

(b) Adaptation must be addressed with the same priority as mitigation and requires appropriate institutional arrangements to enhance adaptation action and support;

(c) All Parties should cooperate, consistent with the principles of the Convention, through effective mechanisms, enhanced means and appropriate enabling environments, and enhance technology development and the transfer of technologies to developing country Parties to enable action on mitigation and adaptation;

(d) Mobilization and provision of scaled-up, new, additional, adequate and predictable financial resources is necessary to address the adaptation and mitigation needs of developing countries;

(e) Capacity-building is essential to enable developing country Parties to participate fully in, and to implement effectively, their commitments under the Convention; and that the goal is to enhance the capacity of developing country Parties in all areas;

3. *Recognizes* that warming of the climate system is unequivocal and that most of the observed increase in global average temperatures since the mid-twentieth century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations, as assessed by the Intergovernmental Panel on Climate Change in its Fourth Assessment Report;

4. *Further recognizes* that deep cuts in global greenhouse gas emissions are required according to science, and as documented in the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, with a view to reducing global greenhouse gas emissions so as to hold the increase in global average temperature below 2 °C above pre-industrial levels, and that Parties should take urgent action to meet this long-term goal, consistent with science and on the basis of equity; *also recognizes* the need to consider, in the context of the first review, as referred to in paragraph 138 below, strengthening the long-term global goal on the basis of the best available scientific knowledge, including in relation to a global average temperature rise of 1.5 °C;

5. *Agrees*, in the context of the long-term goal and the ultimate objective of the Convention and the Bali Action Plan, to work towards identifying a global goal for substantially reducing global emissions by 2050, and to consider it at the seventeenth session of the Conference of the Parties;

6. *Also agrees* that Parties should cooperate in achieving the peaking of global and national greenhouse gas emissions as soon as possible, recognizing that the time frame for peaking will be longer in developing countries, and bearing in mind that social and economic development and poverty eradication are the first and overriding priorities of developing countries and that a low-carbon development strategy is indispensable to sustainable development; in this context, *further agrees* to work towards identifying a time frame for global peaking of greenhouse gas emissions based on the best available scientific knowledge and equitable access to sustainable development, and to consider it at the seventeenth session of the Conference of the Parties;

7. *Recognizes* the need to engage a broad range of stakeholders at the global, regional, national and local levels, be they government, including subnational and local government, private business or civil society, including youth and persons with disability, and that

gender equality and the effective participation of women and indigenous peoples are important for effective action on all aspects of climate change;

8. *Emphasizes* that Parties should, in all climate change related actions, fully respect human rights;

9. *Confirms* that Parties, especially developing country Parties that would have to bear a disproportionate or abnormal burden under the long-term cooperative action under the Convention, should be given full consideration;

10. *Realizes* that addressing climate change requires a paradigm shift towards building a low-carbon society that offers substantial opportunities and ensures continued high growth and sustainable development, based on innovative technologies and more sustainable production and consumption and lifestyles, while ensuring a just transition of the workforce that creates decent work and quality jobs;

II. Enhanced action on adaptation

11. *Agrees* that adaptation is a challenge faced by all Parties, and that enhanced action and international cooperation on adaptation is urgently required to enable and support the implementation of adaptation actions aimed at reducing vulnerability and building resilience in developing country Parties, taking into account the urgent and immediate needs of those developing countries that are particularly vulnerable;

12. *Affirms* that enhanced action on adaptation should be undertaken in accordance with the Convention, should follow a country-driven, gender-sensitive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems, and should be based on and guided by the best available science and, as appropriate, traditional and indigenous knowledge, with a view to integrating adaptation into relevant social, economic and environmental policies and actions, where appropriate;

13. *Decides* to hereby establish the Cancun Adaptation Framework encompassing the provisions laid out below, with the objective of enhancing action on adaptation, including through international cooperation and coherent consideration of matters relating to adaptation under the Convention;

14. *Invites* all Parties to enhance action on adaptation under the Cancun Adaptation Framework, taking into account their common but differentiated responsibilities and respective capabilities, and specific national and regional development priorities, objectives and circumstances, by undertaking, inter alia, the following:

(a) Planning, prioritizing and implementing adaptation actions, including projects and programmes,[1] and actions identified in national and subnational adaptation plans and strategies, national adaptation programmes of action of the least developed countries, national communications, technology needs assessments and other relevant national planning documents;

(b) Impact, vulnerability and adaptation assessments, including assessments of financial needs as well as economic, social and environmental evaluation of adaptation options;

(c) Strengthening institutional capacities and enabling environments for adaptation, including for climate-resilient development and vulnerability reduction;

[1] Including in the areas of water resources; health; agriculture and food security; infrastructure; socio-economic activities; terrestrial, freshwater and marine ecosystems; and coastal zones.

(d) Building resilience of socio-economic and ecological systems, including through economic diversification and sustainable management of natural resources;

(e) Enhancing climate change related disaster risk reduction strategies, taking into consideration the Hyogo Framework for Action,[2] where appropriate, early warning systems, risk assessment and management, and sharing and transfer mechanisms such as insurance, at the local, national, subregional and regional levels, as appropriate;

(f) Measures to enhance understanding, coordination and cooperation with regard to climate change induced displacement, migration and planned relocation, where appropriate, at the national, regional and international levels;

(g) Research, development, demonstration, diffusion, deployment and transfer of technologies, practices and processes, and capacity-building for adaptation, with a view to promoting access to technologies, in particular in developing country Parties;

(h) Strengthening data, information and knowledge systems, education and public awareness;

(i) Improving climate-related research and systematic observation for climate data collection, archiving, analysis and modelling in order to provide decision makers at the national and regional levels with improved climate-related data and information;

15. *Decides* to hereby establish a process to enable least developed country Parties to formulate and implement national adaptation plans, building upon their experience in preparing and implementing national adaptation programmes of action, as a means of identifying medium- and long-term adaptation needs and developing and implementing strategies and programmes to address those needs;

16. *Invites* other developing country Parties to employ the modalities formulated to support the above-mentioned national adaptation plans in the elaboration of their planning effort referred to in paragraph 14 (a) above;

17. *Requests* the Subsidiary Body for Implementation to elaborate modalities and guidelines for the provisions of paragraphs 15 and 16 above, for adoption by the Conference of the Parties at its seventeenth session;

18. *Requests* developed country Parties to provide developing country Parties, taking into account the needs of those that are particularly vulnerable, with long-term, scaled-up, predictable, new and additional finance, technology and capacity-building, consistent with relevant provisions, to implement urgent, short-, medium- and long-term adaptation actions, plans, programmes and projects at the local, national, subregional and regional levels, in and across different economic and social sectors and ecosystems, as well as to undertake the activities referred to in paragraphs 14–16 above and paragraphs 30, 32 and 33 below;

19. *Acknowledges* the need to strengthen, enhance and better utilize existing institutional arrangements and expertise under the Convention;

20. *Decides* to hereby establish an Adaptation Committee to promote the implementation of enhanced action on adaptation in a coherent manner under the Convention, inter alia, through the following functions:

(a) Providing technical support and guidance to the Parties, respecting the country-driven approach, with a view to facilitating the implementation of adaptation activities, including those listed in paragraphs 14 and 15 above, where appropriate;

(b) Strengthening, consolidating and enhancing the sharing of relevant information, knowledge, experience and good practices, at the local, national, regional and

[2] <http://www.unisdr.org/eng/hfa/hfa.htm>.

international levels, taking into account, as appropriate, traditional knowledge and practices;

(c) Promoting synergy and strengthening engagement with national, regional and international organizations, centres and networks, in order to enhance the implementation of adaptation actions, in particular in developing country Parties;

(d) Providing information and recommendations, drawing on adaptation good practices, for consideration by the Conference of the Parties when providing guidance on means to incentivize the implementation of adaptation actions, including finance, technology and capacity-building and other ways to enable climate-resilient development and reduce vulnerability, including to the operating entities of the financial mechanism of the Convention, as appropriate;

(e) Considering information communicated by Parties on their monitoring and review of adaptation actions, support provided and received, possible needs and gaps and other relevant information, including information communicated under the Convention, with a view to recommending what further actions may be required, as appropriate;

21. *Invites* Parties to submit to the secretariat, by 21 February 2011, views on the composition of, and modalities and procedures for, the Adaptation Committee, including on proposed linkages with other relevant institutional arrangements;

22. *Requests* the secretariat to compile these submissions into a miscellaneous document, to be made available by the fourteenth session of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention, and to prepare a synthesis report based on those submissions by the fourteenth session of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention;

23. *Requests* the Ad Hoc Working Group on Long-term Cooperative Action under the Convention, taking into account the above-mentioned submissions and synthesis report, to elaborate the composition of, and modalities and procedures for, the Adaptation Committee, for adoption by the Conference of the Parties at its seventeenth session;

24. *Also requests* the Ad Hoc Working Group on Long-term Cooperative Action under the Convention, in elaborating the above-mentioned modalities and procedures, to define, as appropriate, linkages with other relevant institutional arrangements under and outside the Convention, including at the national and regional levels;

25. *Recognizes* the need to strengthen international cooperation and expertise in order to understand and reduce loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather events and slow onset events;[3]

26. *Decides* to hereby establish a work programme in order to consider, including through workshops and expert meetings, as appropriate, approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change;

27. *Requests* the Subsidiary Body for Implementation to agree on activities to be undertaken under the above-mentioned work programme;

28. *Invites* Parties and relevant organizations to submit to the secretariat, by 21 February 2011, views and information on what elements should be included in the work programme, including the following:

[3] Including sea level rise, increasing temperatures, ocean acidification, glacial retreat and related impacts, salinization, land and forest degradation, loss of biodiversity and desertification.

(a) Possible development of a climate risk insurance facility to address impacts associated with severe weather events;

(b) Options for risk management and reduction, risk sharing and transfer mechanisms such as insurance, including options for micro-insurance, and resilience-building, including through economic diversification;

(c) Approaches for addressing rehabilitation measures associated with slow onset events;

(d) Engagement of stakeholders with relevant specialized expertise;

29. *Requests* the secretariat to compile these submissions into a miscellaneous document and to prepare a synthesis report based on those submissions, to be made available for consideration by the Subsidiary Body for Implementation at its thirty-fourth session, and with a view to making recommendations on loss and damage to the Conference of the Parties for its consideration at its eighteenth session;

30. *Invites* Parties to strengthen and, where necessary, establish regional centres and networks, in particular in developing countries, with support from developed country Parties and relevant organizations, as appropriate, and to facilitate and enhance national and regional adaptation actions, in a manner that is country-driven, encourages cooperation and coordination between regional stakeholders and improves the flow of information between the Convention process and national and regional activities;

31. *Notes* that an international centre to enhance adaptation research and coordination could also be established in a developing country;

32. *Invites* all Parties to strengthen and, where necessary, establish and/or designate national-level institutional arrangements, with a view to enhancing work on the full range of adaptation actions, from planning to implementation;

33. *Decides* that all Parties should use existing channels to provide information, as appropriate, on support provided and received for adaptation actions in developing countries and on activities undertaken, including, inter alia, progress made, experiences, lessons learned, and challenges and gaps in the delivery of support, with a view to ensuring transparency and accountability and encouraging best practices;

34. *Invites* relevant multilateral, international, regional and national organizations, the public and private sectors, civil society and other relevant stakeholders to undertake and support enhanced action on adaptation at all levels, including under the Cancun Adaptation Framework, as appropriate, in a coherent and integrated manner, building on synergies among activities and processes, and to make information available on the progress made;

35. *Requests* the secretariat to support the implementation of the Cancun Adaptation Framework, including related institutional arrangements under the Convention, in accordance with its mandate and subject to the availability of resources;

III. Enhanced action on mitigation

A. Nationally appropriate mitigation commitments or actions by developed country Parties

Emphasizing the need for deep cuts in global greenhouse gas emissions and early and urgent undertakings to accelerate and enhance the implementation of the Convention by all Parties, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities,

Acknowledging that the largest share of historical global emissions of greenhouse gases originated in developed countries and that, owing to this historical responsibility, developed country Parties must take the lead in combating climate change and the adverse effects thereof,

36. *Takes note* of quantified economy-wide emission reduction targets to be implemented by Parties included in Annex I to the Convention as communicated by them and contained in document FCCC/SB/2011/INF.1[4] (to be issued);

37. *Urges* developed country Parties to increase the ambition of their economy-wide emission reduction targets, with a view to reducing their aggregate anthropogenic emissions of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol to a level consistent with the Fourth Assessment Report of the Intergovernmental Panel on Climate Change;

38. *Requests* the secretariat to organize workshops to clarify the assumptions and the conditions related to the attainment of these targets, including the use of carbon credits from the market-based mechanisms and land use, land-use change and forestry activities, and options and ways to increase their level of ambition;

39. *Also requests* the secretariat to prepare a technical paper based on Parties' submissions with the aim of facilitating understanding of the assumptions and conditions related to the attainment of their emission reduction targets and a comparison of the level of emission reduction efforts;

40. *Decides*, building on existing reporting and review guidelines, processes and experiences, to enhance reporting in the national communications of Parties included in Annex I to the Convention on mitigation targets and on the provision of financial, technological and capacity-building support to developing country Parties as follows:

(a) Developed countries should submit annual greenhouse gas inventories and inventory reports and biennial reports on their progress in achieving emission reductions, including information on mitigation actions to achieve their quantified economy-wide emission targets and emission reductions achieved, projected emissions and the provision of financial, technology and capacity-building support to developing country Parties;

(b) Developed countries shall submit supplementary information on the achievement of quantified economy-wide emission reductions;

(c) Developed countries shall improve the reporting of information on the provision of financial, technology and capacity-building support to developing country Parties;

41. *Also decides* to enhance the guidelines for the reporting of information in national communications by Parties included in Annex I to the Convention, including the development of common reporting formats and methodology for finance, in order to ensure that information provided is complete, comparable, transparent and accurate;

42. *Further decides* to enhance guidelines for the review of information in national communications with respect to the following:

(a) Progress made in achieving emission reductions;

(b) Provision of financial, technology and capacity-building support to developing country Parties;

[4] Parties' communications to the secretariat that are included in the information document are considered communications under the Convention.

43. *Decides* that developed countries should establish national arrangements for the estimation of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol;

44. *Also decides* to establish a process for international assessment of emissions and removals related to quantified economy-wide emission reduction targets under the Subsidiary Body for Implementation, taking into account national circumstances, in a rigorous, robust and transparent manner, with a view to promoting comparability and building confidence;

45. *Further decides* that developed countries should develop low-carbon development strategies or plans;

46. *Decides* on the following work programme for the development of modalities and guidelines described above, building on existing reporting and review guidelines, processes and experiences:

(a) The revision of guidelines, as necessary, on the reporting of national communications, including the biennial report:

(i) The provision of financing, through enhanced common reporting formats, methodologies for finance and tracking of climate-related support;

(ii) Supplementary information on achievement of quantified economy-wide emission reduction targets;

(iii) Information on national inventory arrangements;

(b) The revision of guidelines for the review of national communications, including the biennial report, annual greenhouse gas inventories and national inventory systems;

(c) The establishment of guidelines for national inventory arrangements;

(d) Modalities and procedures for international assessment and review of emissions and removals related to quantified economy-wide emission reduction targets in accordance with paragraph 44 above, including the role of land use, land-use change and forestry, and carbon credits from market-based mechanisms, taking into account international experience;

47. *Invites* Parties to submit views on the items mentioned in paragraph 46 above, including with respect to the initial scheduling of the processes described in this section, by 28 March 2011;

B. Nationally appropriate mitigation actions by developing country Parties

Recognizing that developing country Parties are already contributing and will continue to contribute to a global mitigation effort in accordance with the principles and provisions of the Convention, and could enhance their mitigation actions, depending on provision of finance, technology and capacity-building support by developed country Parties,

Reaffirming that social and economic development and poverty eradication are the first and overriding priorities of developing country Parties, and that the share of global emissions originating in developing countries will grow to meet their social and development needs,

48. *Agrees* that developing country Parties will take nationally appropriate mitigation actions in the context of sustainable development, supported and enabled by technology,

financing and capacity-building, aimed at achieving a deviation in emissions relative to 'business as usual' emissions in 2020;

49. *Takes note* of nationally appropriate mitigation actions to be implemented by Parties not included in Annex I to the Convention as communicated by them and contained in document FCCC/AWGLCA/2011/INF.1[5] (to be issued);

50. *Invites* developing countries that wish to voluntarily inform the Conference of the Parties of their intention to implement nationally appropriate mitigation actions in association with this decision to submit information on those actions to the secretariat;

51. *Requests* the secretariat to organize workshops to understand the diversity of mitigation actions submitted, underlying assumptions and any support needed for the implementation of these actions, noting different national circumstances and the respective capabilities of developing country Parties;

52. *Decides* that, in accordance with Article 4, paragraph 3, of the Convention, developed country Parties shall provide enhanced financial, technological and capacity-building support for the preparation and implementation of nationally appropriate mitigation actions of developing country Parties and for enhanced reporting by these Parties;

53. *Also decides* to set up a registry to record nationally appropriate mitigation actions seeking international support and to facilitate matching of finance, technology and capacity-building support for these actions;

54. *Invites* developing country Parties to submit to the secretariat information on nationally appropriate mitigation actions for which they are seeking support, along with estimated costs and emission reductions, and the anticipated time frame for implementation;

55. *Also invites* developed country Parties to submit to the secretariat information on support available and provided for nationally appropriate mitigation actions;

56. *Requests* the secretariat to record and regularly update in the registry the information provided by Parties on:

(a) Nationally appropriate mitigation actions seeking international support;

(b) Support available from developed country Parties for these actions;

(c) Support provided for nationally appropriate mitigation actions;

57. *Agrees* to develop modalities for the facilitation of support through the registry referred to in paragraph 53 above, including any functional relationship with the financial mechanism;

58. *Decides* to recognize nationally appropriate mitigation actions of developing countries in a separate section of the registry;

59. *Requests* the secretariat to record, and regularly update, in a separate section of the registry, information submitted by Parties on the following:

(a) Mitigation actions contained in document FCCC/AWGLCA/2011/INF.1;

(b) Additional mitigation actions submitted in association with paragraph 50 above;

[5] Parties' communications to the secretariat that are included in the information document are considered communications under the Convention.

(c) Once support has been provided, internationally supported mitigation actions and associated support;

60. *Decides* to enhance reporting in national communications, including inventories, from Parties not included in Annex I to the Convention on mitigation actions and their effects, and support received, with additional flexibility to be given to the least developed country Parties and small island developing States:

(a) The content and frequency of national communications from Parties not included in Annex I to the Convention will not be more onerous than that for Parties included in Annex I to the Convention;

(b) Parties not included in Annex I to the Convention should submit their national communications to the Conference of the Parties, in accordance with Article 12, paragraph 1, of the Convention, every four years or in accordance with any further decisions on frequency by the Conference of the Parties, taking into account a differentiated timetable and the prompt provision of financial resources to cover the agreed full costs incurred by Parties not included in Annex I to the Convention in preparing their national communications;

(c) Developing countries, consistent with their capabilities and the level of support provided for reporting, should also submit biennial update reports containing updates of national greenhouse gas inventories, including a national inventory report and information on mitigation actions, needs and support received;

61. *Also decides* that internationally supported mitigation actions will be measured, reported and verified domestically and will be subject to international measurement, reporting and verification in accordance with guidelines to be developed under the Convention;

62. *Further decides* that domestically supported mitigation actions will be measured, reported and verified domestically in accordance with general guidelines to be developed under the Convention;

63. *Decides* to conduct international consultations and analysis of biennial reports under the Subsidiary Body for Implementation, in a manner that is non-intrusive, non-punitive and respectful of national sovereignty; the international consultations and analysis will aim to increase transparency of mitigation actions and their effects, through analysis by technical experts in consultation with the Party concerned and through a facilitative sharing of views, and will result in a summary report;

64. *Also decides* that information considered should include the national greenhouse gas inventory report, information on mitigation actions, including a description, analysis of the impacts and associated methodologies and assumptions, progress in implementation and information on domestic measurement, reporting and verification, and support received; discussion about the appropriateness of such domestic policies and measures is not part of the process; discussions should be intended to provide transparency of information related to unsupported actions;

65. *Encourages* developing countries to develop low-carbon development strategies or plans in the context of sustainable development;

66. *Agrees* on a work programme for the development of modalities and guidelines for: facilitation of support to nationally appropriate mitigation actions through a registry; measurement, reporting and verification of supported actions and corresponding support; biennial reports as part of national communications from Parties not included in Annex I to the Convention; domestic verification of mitigation actions undertaken with domestic resources; and international consultations and analysis;

67. *Invites* Parties to submit views on the items mentioned in paragraph 66 above, including with respect to the initial scheduling of the processes described in this section, by 28 March 2011;

C. Policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries

Affirming that, in the context of the provision of adequate and predictable support to developing country Parties, Parties should collectively aim to slow, halt and reverse forest cover and carbon loss, in accordance with national circumstances, consistent with the ultimate objective of the Convention, as stated in Article 2,

Also affirming the need to promote broad country participation in all phases described in paragraph 73 below, including through the provision of support that takes into account existing capacities,

68. *Encourages* all Parties to find effective ways to reduce the human pressure on forests that results in greenhouse gas emissions, including actions to address drivers of deforestation;

69. *Affirms* that the implementation of the activities referred to in paragraph 70 below should be carried out in accordance with appendix I to this decision, and that the safeguards referred to in paragraph 2 of appendix I to this decision should be promoted and supported;

70. *Encourages* developing country Parties to contribute to mitigation actions in the forest sector by undertaking the following activities, as deemed appropriate by each Party and in accordance with their respective capabilities and national circumstances:

(a) Reducing emissions from deforestation;

(b) Reducing emissions from forest degradation;

(c) Conservation of forest carbon stocks;

(d) Sustainable management of forests;

(e) Enhancement of forest carbon stocks;

71. *Requests* developing country Parties aiming to undertake the activities referred to in paragraph 70 above, in the context of the provision of adequate and predictable support, including financial resources and technical and technological support to developing country Parties, in accordance with national circumstances and respective capabilities, to develop the following elements:

(a) A national strategy or action plan;

(b) A national forest reference emission level and/or forest reference level[6] or, if appropriate, as an interim measure, subnational forest reference emission levels and/or forest reference levels, in accordance with national circumstances, and with provisions contained in decision 4/CP.15, and with any further elaboration of those provisions adopted by the Conference of the Parties;

[6] In accordance with national circumstances, national forest reference emission levels and/or forest reference levels could be a combination of subnational forest reference emissions levels and/or forest reference levels.

(c) A robust and transparent national forest monitoring system for the monitoring and reporting of the activities referred to in paragraph 70 above, with, if appropriate, subnational monitoring and reporting as an interim measure,[7] in accordance with national circumstances, and with the provisions contained in decision 4/CP.15, and with any further elaboration of those provisions agreed by the Conference of the Parties;

(d) A system for providing information on how the safeguards referred to in appendix I to this decision are being addressed and respected throughout the implementation of the activities referred to in paragraph 70 above, while respecting sovereignty;

72. *Also requests* developing country Parties, when developing and implementing their national strategies or action plans, to address, inter alia, the drivers of deforestation and forest degradation, land tenure issues, forest governance issues, gender considerations and the safeguards identified in paragraph 2 of appendix I to this decision, ensuring the full and effective participation of relevant stakeholders, inter alia indigenous peoples and local communities;

73. *Decides* that the activities undertaken by Parties referred to in paragraph 70 above should be implemented in phases, beginning with the development of national strategies or action plans, policies and measures, and capacity-building, followed by the implementation of national policies and measures and national strategies or action plans that could involve further capacity-building, technology development and transfer and results-based demonstration activities, and evolving into results-based actions that should be fully measured, reported and verified;

74. *Recognizes* that the implementation of the activities referred to in paragraph 70 above, including the choice of a starting phase as referred to in paragraph 73 above, depends on the specific national circumstances, capacities and capabilities of each developing country Party and the level of support received;

75. *Requests* the Subsidiary Body for Scientific and Technological Advice to develop a work programme on the matters referred to in appendix II to this decision;

76. *Urges* Parties, in particular developed country Parties, to support, through multilateral and bilateral channels, the development of national strategies or action plans, policies and measures and capacity-building, followed by the implementation of national policies and measures and national strategies or action plans that could involve further capacity-building, technology development and transfer and results-based demonstration activities, including consideration of the safeguards referred to in paragraph 2 of appendix I to this decision, taking into account the relevant provisions on finance including those relating to reporting on support;

77. *Requests* the Ad Hoc Working Group on Long-term Cooperative Action under the Convention to explore financing options for the full implementation of the results-based actions[8] referred to in paragraph 73 above and to report on progress made, including any recommendations for draft decisions on this matter, to the Conference of the Parties at its seventeenth session;

78. *Also requests* Parties to ensure coordination of the activities referred to in paragraph 70 above, including of the related support, particularly at the national level;

[7] Including monitoring and reporting of emissions displacement at the national level, if appropriate, and reporting on how displacement of emissions is being addressed, and on the means to integrate subnational monitoring systems into a national monitoring system.

[8] These actions require national monitoring systems.

79. *Invites* relevant international organizations and stakeholders to contribute to the activities referred to in paragraphs 70 and 78 above;

D. Various approaches, including opportunities for using markets, to enhance the cost-effectiveness of, and to promote, mitigation actions, bearing in mind different circumstances of developed and developing countries

Acknowledging the need to maintain consistency with the principles of the Convention,

Emphasizing the importance of contributing to sustainable development, including through technology transfer and other co-benefits,

Recognizing the importance of enhancing sustainable lifestyles and patterns of production and consumption,

Aware of the need to provide incentives in support of low-emission development strategies,

80. *Decides* to consider the establishment, at the seventeenth session of the Conference of the Parties, of one or more market-based mechanisms to enhance the cost-effectiveness of, and to promote, mitigation actions, taking into account the following:

(a) Ensuring voluntary participation of Parties, supported by the promotion of fair and equitable access for all Parties;

(b) Complementing other means of support for nationally appropriate mitigation actions by developing country Parties;

(c) Stimulating mitigation across broad segments of the economy;

(d) Safeguarding environmental integrity;

(e) Ensuring a net decrease and/or avoidance of global greenhouse gas emissions;

(f) Assisting developed country Parties to meet part of their mitigation targets, while ensuring that the use of such a mechanism or mechanisms is supplemental to domestic mitigation efforts;

(g) Ensuring good governance and robust market functioning and regulation;

81. *Requests* the Ad Hoc Working Group on Long-term Cooperative Action under the Convention to elaborate the mechanism or mechanisms referred to in paragraph 80 above, with a view to recommending a draft decision or decisions to the Conference of the Parties for consideration at its seventeenth session;

82. *Invites* Parties and accredited observer organizations to submit to the secretariat, by 21 February 2011, their views on the matters referred to in paragraph 81 above;

83. *Undertakes*, in developing and implementing the mechanism or mechanisms referred to in paragraph 80 above, to maintain and build upon existing mechanisms, including those established under the Kyoto Protocol;

84. *Decides* to consider the establishment, at the seventeenth session of the Conference of the Parties, of one or more non-market-based mechanisms to enhance the cost-effectiveness of, and to promote, mitigation actions;

85. *Requests* the Ad Hoc Working Group on Long-term Cooperative Action under the Convention to elaborate the mechanism or mechanisms referred to in paragraph 84 above, with a view to recommending a draft decision or decisions to the Conference of the Parties for consideration at its seventeenth session;

86. *Invites* Parties and accredited observer organizations to submit to the secretariat, by 21 February 2011, their views on the matters referred to in paragraph 85 above;

87. *Also invites* Parties and accredited observer organizations to submit to the secretariat, by 21 February 2011, information on the evaluation of various approaches in enhancing the cost-effectiveness of, and promoting, mitigation actions, including activities implemented jointly under Article 4, paragraph 2(a), of the Convention and any other relevant activities, for synthesis by the secretariat;

E. Economic and social consequences of response measures

Reaffirming the importance of the objective of the Convention, and the relevant principles and provisions of the Convention related to economic and social consequences of response measures, in particular its Articles 2, 3 and 4,

Recognizing that the implementation of response measures to mitigate climate change taken by a Party may result in negative economic and social consequences for other Parties, and the need to take into consideration in the implementation of the commitments of the Convention the situation of Parties, particularly developing country Parties, with economies that are vulnerable to the adverse impact of the implementation of measures to respond to climate change, referred to in Article 4, paragraphs 8, 9 and 10, of the Convention,

Affirming that responses to climate change should be coordinated with social and economic development in an integrated manner, with a view to avoiding adverse impacts on the latter, taking fully into account the legitimate priority needs of developing country Parties for the achievement of sustained economic growth and the eradication of poverty, and the consequences for vulnerable groups, in particular women and children,

Recognizing the importance of avoiding or minimizing negative impacts of response measures on social and economic sectors, promoting a just transition of the workforce, the creation of decent work and quality jobs in accordance with nationally defined development priorities and strategies, and contributing to building new capacity for both production and service-related jobs in all sectors, promoting economic growth and sustainable development,

Taking note of relevant provisions of the United Nations Declaration on the Rights of Indigenous Peoples,

88. *Urges* Parties, in the implementation of measures to mitigate climate change, to take into consideration the economic and social impacts of response measures and the needs of Parties, in particular developing country Parties, impacted by response measures, consistent with relevant provisions of the Convention;

89. *Also urges* developed country Parties to strive to implement policies and measures to respond to climate change in such a way as to avoid negative social and economic consequences for developing country Parties, taking into account Article 3 of the Convention, and to assist these Parties to address such consequences by providing support, including financial resources, transfer of technology and capacity-building, in accordance with Article 4 of the Convention, to build up the resilience of societies and economies negatively affected by response measures;

90. *Reaffirms* that the Parties should cooperate to promote a supportive and open international economic system that would lead to sustainable economic growth and development in all Parties, particularly developing country Parties, thus enabling them better to address the problems of climate change; measures taken to combat climate change, including unilateral ones, should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade;

91. *Agrees* that information relating to response measures should be considered in a structured manner in order to enhance the implementation of Article 4, paragraph 1(g) and (h), of the Convention, recognizing the needs of developing country Parties identified in Article 4, paragraphs 8, 9 and 10;

92. *Decides* that Parties should cooperate fully to enhance understanding of the economic and social consequences of response measures, taking into account the need for information from those affected, and evidence of actual impacts, and of both positive and negative effects; and *further decides* to consider how existing channels, such as national communications, including the possible submission of supplementary information, as considered by the Subsidiary Body for Implementation, could be improved and built upon;

93. *Further decides* to provide a forum on the impact of the implementation of response measures, and to that end requests the Chairs of the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation to convene such a forum at the thirty-fourth and thirty-fifth sessions of these bodies, with the objective of developing a work programme under the subsidiary bodies to address these impacts, with a view to adopting, at the seventeenth session of the Conference of the Parties, modalities for the operationalization of the work programme and a possible forum on response measures;

94. *Invites* Parties and relevant intergovernmental organizations to submit to the secretariat, by 28 March 2011, their views on the issues referred to in paragraph 93 above for consideration by the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation at their thirty-fourth sessions;

IV. Finance, technology and capacity-building

A. Finance

95. *Takes note* of the collective commitment by developed countries to provide new and additional resources, including forestry and investments through international institutions, approaching USD 30 billion for the period 2010–2012, with a balanced allocation between adaptation and mitigation; funding for adaptation will be prioritized for the most vulnerable developing countries, such as the least developed countries, small island developing States and Africa;

96. *Invites*, in order to enhance transparency, developed country Parties to submit to the secretariat for compilation into an information document, by May 2011, 2012 and 2013, information on the resources provided to fulfil the commitment referred to in paragraph 95 above, including ways in which developing country Parties access these resources;

97. *Decides* that, in accordance with the relevant provisions of the Convention, scaled-up, new and additional, predictable and adequate funding shall be provided to developing country Parties, taking into account the urgent and immediate needs of developing countries that are particularly vulnerable to the adverse effects of climate change;

98. *Recognizes* that developed country Parties commit, in the context of meaningful mitigation actions and transparency on implementation, to a goal of mobilizing jointly USD 100 billion per year by 2020 to address the needs of developing countries;

99. *Agrees* that, in accordance with paragraph 1(e) of the Bali Action Plan, funds provided to developing country Parties may come from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources;

100. *Decides* that a significant share of new multilateral funding for adaptation should flow through the Green Climate Fund, referred to in paragraph 102 below;

101. *Takes note* of the relevant reports on the financing needs and options for the mobilization of resources to address the needs of developing country Parties with regard to climate change adaptation and mitigation, including the report of the High-level Advisory Group on Climate Change Financing;

102. *Decides* to establish a Green Climate Fund, to be designated as an operating entity of the financial mechanism of the Convention under Article 11, with arrangements to be concluded between the Conference of the Parties and the Green Climate Fund to ensure that it is accountable to and functions under the guidance of the Conference of the Parties, to support projects, programmes, policies and other activities in developing country Parties using thematic funding windows;

103. *Also decides* that the Fund shall be governed by a Board of 24 members, comprising an equal number of members from developing and developed country Parties; representation from developing country Parties shall include representatives of relevant United Nations regional groupings and representatives of small island developing States and the least developed countries; each Board member shall have an alternate member; with alternate members entitled to participate in the meetings of the board only through the principal member, without the right to vote, unless they are serving as the member; during the absence of the member from all or part of a meeting of the Board, his or her alternate shall serve as the member;

104. *Further decides* that the Green Climate Fund shall have a trustee; the trustee for the Green Climate Fund shall have the administrative competence to manage the financial assets of the Green Climate Fund, maintain appropriate financial records and prepare financial statements and other reports required by the Board of the Green Climate Fund, in accordance with internationally accepted fiduciary standards;

105. *Decides* that the trustee shall administer the assets of the Green Climate Fund only for the purpose of, and in accordance with, the relevant decisions of the Green Climate Fund Board; the trustee shall hold the assets of the Green Climate Fund separate and apart from the assets of the trustee, but may commingle them for administrative and investment purposes with other assets maintained by the trustee; and the trustee shall establish and maintain separate records and accounts to identify the assets of the Green Climate Fund;

106. *Decides* that the trustee shall be accountable to the Green Climate Fund Board for the performance of its fiduciary responsibilities;

107. *Invites* the World Bank to serve as the interim trustee for the Green Climate Fund, subject to a review three years after operationalization of the Fund;

108. *Decides* that the operation of the Fund shall be supported by an independent secretariat;

109. *Also decides* that the Green Climate Fund shall be designed by a Transitional Committee in accordance with the terms of reference contained in appendix III to this decision; the Transitional Committee shall have 40 members, with 15 members from developed country Parties and 25 members from developing country Parties as follows:

(a) Seven members from Africa;

(b) Seven members from Asia;

(c) Seven members from Group of Latin America and the Caribbean;

(d) Two members from small island developing States;

(e) Two members from the least developed countries;

110. *Invites* the Executive Secretary of the secretariat, in consultation with the President of the Conference of the Parties, to convene the initial meeting of the Transitional Committee, with members having the necessary experience and skills, notably in the area of finance and climate change; the meetings of the Transitional Committee will be open to observers;

111. *Requests* the secretariat, in consultation with the President of the Conference of the Parties, to make arrangements enabling relevant United Nations agencies, international financial institutions and multilateral development banks, along with the secretariat and the Global Environment Facility, to second staff to support the work of the Transitional Committee for the design phase of the Green Climate Fund;

112. *Decides* to establish a Standing Committee under the Conference of the Parties to assist the Conference of the Parties in exercising its functions with respect to the financial mechanism of the Convention in terms of improving coherence and coordination in the delivery of climate change financing, rationalization of the financial mechanism, mobilization of financial resources and measurement, reporting and verification of support provided to developing country Parties; Parties agree to further define the roles and functions of this Standing Committee;

B. Technology development and transfer

Recalling the commitments under the Convention, in particular Article 4, paragraphs 1, 3, 5, 7, 8 and 9,

Confirming the importance of promoting and enhancing national and international cooperative action on the development and transfer of environmentally sound technologies to developing country Parties to support action on mitigation and adaptation now, up to and beyond 2012, in order to achieve the ultimate objective of the Convention,

Recognizing that an early and rapid reduction in emissions and the urgent need to adapt to the adverse impacts of climate change require large-scale diffusion and transfer of, or access to, environmentally sound technologies,

Stressing the need for effective mechanisms, enhanced means, appropriate enabling environments and the removal of obstacles to the scaling up of the development and transfer of technology to developing country Parties,

113. *Decides* that the objective of enhanced action on technology development and transfer is to support action on mitigation and adaptation in order to achieve the full implementation of the Convention;

114. *Also decides* that, in pursuit of this objective, technology needs must be nationally determined, based on national circumstances and priorities;

115. *Further decides* to accelerate action consistent with international obligations, at different stages of the technology cycle, including research and development, demonstration, deployment, diffusion and transfer of technology (hereinafter referred in

this decision as technology development and transfer) in support of action on mitigation and adaptation;

116. *Encourages* Parties, in the context of Article 4, paragraphs 1(c) and 5, of the Convention and consistent with their respective capabilities and national circumstances and priorities, to undertake domestic actions identified through country-driven approaches, to engage in bilateral and multilateral cooperative activities on technology development and transfer and to increase private and public research, development and demonstration in relation to technologies for mitigation and adaptation;

117. *Decides* to establish a Technology Mechanism to facilitate the implementation of actions for achieving the objective referred to in paragraphs 113–115 above, under the guidance of and accountable to the Conference of the Parties, which will consist of the following components:

(a) A Technology Executive Committee, to undertake the functions contained in paragraph 121 below;

(b) A Climate Technology Centre and Network, to undertake the functions contained in paragraph 123 below;

118. *Also decides* that the Technology Executive Committee and the Climate Technology Centre and Network, consistent with their respective functions, should facilitate the effective implementation of the Technology Mechanism, under the guidance of the Conference of the Parties;

119. *Further decides* that the Technology Executive Committee shall further implement the framework for meaningful and effective actions to enhance the implementation of Article 4, paragraph 5, of the Convention adopted by decision 4/CP.7 and enhanced by decision 3/CP.13;

120. *Decides* that priority areas that could be considered under the Convention may include:

(a) Development and enhancement of the endogenous capacities and technologies of developing country Parties, including cooperative research, development and demonstration programmes;

(b) Deployment and diffusion of environmentally sound technologies and know-how in developing country Parties;

(c) Increased public and private investment in technology development, deployment, diffusion and transfer;

(d) Deployment of soft and hard technologies for the implementation of adaptation and mitigation actions;

(e) Improved climate change observation systems and related information management;

(f) Strengthening of national systems of innovation and technology innovation centres;

(g) Development and implementation of national technology plans for mitigation and adaptation;

121. *Also decides* that the functions of the Technology Executive Committee shall be to:

(a) Provide an overview of technological needs and analysis of policy and technical issues related to the development and transfer of technologies for mitigation and adaptation;

(b) Consider and recommend actions to promote technology development and transfer, in order to accelerate action on mitigation and adaptation;

(c) Recommend guidance on policies and programme priorities related to technology development and transfer with special consideration given to the least developed country Parties;

(d) Promote and facilitate collaboration on the development and transfer of technologies for mitigation and adaptation between governments, the private sector, non-profit organizations and academic and research communities;

(e) Recommend actions to address the barriers to technology development and transfer in order to enable enhanced action on mitigation and adaptation;

(f) Seek cooperation with relevant international technology initiatives, stakeholders and organizations, and promote coherence and cooperation across technology activities, including activities under and outside of the Convention;

(g) Catalyse the development and use of technology road maps or action plans at the international, regional and national levels through cooperation between relevant stakeholders, particularly governments and relevant organizations or bodies, including the development of best practice guidelines as facilitative tools for action on mitigation and adaptation;

122. *Further decides* that the Technology Executive Committee shall have the mandate and composition as contained in appendix IV to this decision;

123. *Decides* that the Climate Technology Centre shall facilitate a network of national, regional, sectoral and international technology networks, organizations and initiatives with a view to engaging the participants of the Network effectively in the following functions:

(a) At the request of a developing country Party:

(i) Providing advice and support related to the identification of technology needs and the implementation of environmentally sound technologies, practices and processes;

(ii) Facilitating the provision of information, training and support for programmes to build or strengthen capacity of developing countries to identify technology options, make technology choices and operate, maintain and adapt technology;

(iii) Facilitating prompt action on the deployment of existing technology in developing country Parties based on identified needs;

(b) Stimulating and encouraging, through collaboration with the private sector, public institutions, academia and research institutions, the development and transfer of existing and emerging environmentally sound technologies, as well as opportunities for North–South, South–South and triangular technology cooperation;

(c) Facilitating a network of national, regional, sectoral and international technology centres, networks, organization and initiatives with a view to:

(i) Enhancing cooperation with national, regional and international technology centres and relevant national institutions;

(ii) Facilitating international partnerships among public and private stakeholders to accelerate the innovation and diffusion of environmentally sound technologies to developing country Parties;

(iii) Providing, at the request of a developing country Party, in-country technical assistance and training to support identified technology actions in developing country Parties;

(iv) Stimulating the establishment of twinning centre arrangements to promote North–South, South–South and triangular partnerships, with a view to encouraging cooperative research and development;

(v) Identifying, disseminating and assisting with developing analytical tools, policies and best practices for country-driven planning to support the dissemination of environmentally sound technologies;

(d) Performing other such activities as may be necessary to carry out its functions;

124. *Also decides* to terminate the mandate of the Expert Group on Technology Transfer at the conclusion of the sixteenth session of the Conference of the Parties;

125. *Further decides* that the Technology Executive Committee shall convene its first meeting as soon as practicable following the election of its members and shall elaborate its modalities and procedures taking into account the need to achieve coherence and maintain interactions with other relevant institutional arrangements under and outside of the Convention, for consideration by the Conference of the Parties at its seventeenth session;

126. *Decides* that the Technology Executive Committee and the Climate Technology Centre and Network shall report, on an interim basis[9] and without prejudice to the relationship between the Technology Executive Committee and the Climate Technology Centre and Network as referred to in paragraph 128 (a) below to the Conference of the Parties, through the subsidiary bodies, on their respective activities and the performance of their respective functions;

127. *Also decides* that the Climate Technology Centre and Network and the Technology Executive Committee shall relate so as to promote coherence and synergy;

Work programme for the Ad Hoc Working Group on Long-term Cooperative Action under the Convention in 2011 on technology development and transfer

128. *Underlines* the importance of continued dialogue among Parties in 2011 through the Ad Hoc Working Group on Long-term Cooperative Action under the Convention, including on the following matters, with a view to the Conference of the Parties taking a decision at its seventeenth session, in order to make the Technology Mechanism fully operational in 2012:

(a) The relationship between the Technology Executive Committee and the Climate Technology Centre and Network, and their reporting lines;

(b) The governance structure of and terms of reference for the Climate Technology Centre and Network and how the Climate Technology Centre will relate to the Network, drawing upon the results of the workshop referred to in paragraph 129 below;

(c) The procedure for calls for proposals and the criteria to be used to evaluate and select the host of the Climate Technology Centre and Network;

(d) The potential links between the Technology Mechanism and the financial mechanism;

(e) Consideration of additional functions for the Technology Executive Committee and the Climate Technology Centre and Network;

[9] Until there is a decision on the issues contained in paragraph 128 (a) below.

129. *Requests* the Ad Hoc Working Group on Long-term Cooperative Action under the Convention to convene an expert workshop, in conjunction with one of its sessions in 2011, on the matters contained in paragraph 128 above, drawing upon the preliminary work undertaken by the Expert Group on Technology Transfer, and to report on the results of this workshop at that session;

C. Capacity-building

Reaffirming that capacity-building is essential to enable developing country Parties to participate fully in addressing the challenges of climate change, and to implement effectively their commitments under the Convention,

Recalling the provisions related to capacity-building for developing country Parties contained in relevant decisions adopted by the Conference of the Parties, especially decision 2/CP.7,

Taking into account that the scope of capacity-building and related needs as contained in the annex to decision 2/CP.7 and the key factors identified in decision 2/CP.10 remain valid,

Acknowledging that capacity-building is cross-cutting in nature and an integral part of enhanced action on mitigation, adaptation, technology development and transfer, and access to financial resources,

Also acknowledging that, in addition, there may be specific capacity-building activities that require support to enable developing countries to undertake the enhanced implementation of the Convention,

Reaffirming that capacity-building should be a continuous, progressive and iterative process that is participatory, country-driven and consistent with national priorities and circumstances,

130. *Decides* that capacity-building support to developing country Parties should be enhanced with a view to strengthening endogenous capacities at the subnational, national or regional levels, as appropriate, taking into account gender aspects, to contribute to the achievement of the full, effective and sustained implementation of the Convention, by, inter alia:

(a) Strengthening relevant institutions at various levels, including focal points and national coordinating bodies and organizations;

(b) Strengthening networks for the generation, sharing and management of information and knowledge, including through North–South, South–South and triangular cooperation;

(c) Strengthening climate change communication, education, training and public awareness at all levels;

(d) Strengthening integrated approaches and the participation of various stakeholders in relevant social, economic and environmental policies and actions;

(e) Supporting existing and emerging capacity-building needs identified in the areas of mitigation, adaptation, technology development and transfer, and access to financial resources;

131. *Also decides* that financial resources for enhanced action on capacity-building in developing country Parties should be provided by Parties included in Annex II to the Convention and other Parties in a position to do so through the current and any future

operating entities of the financial mechanism, as well as through various bilateral, regional and other multilateral channels, as appropriate;

132. *Encourages* developed country Parties to continue to report through their national communications, in accordance with the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications", on the support they have provided for capacity-building in developing country Parties;

133. *Invites* developed country Parties in a position to do so to provide information, through annual submissions to the secretariat and other appropriate channels, on the support they have provided for capacity-building in developing country Parties;

134. *Encourages* developing country Parties to continue to report through their national communications, in accordance with the "Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention", on progress made in enhancing their capacity to address climate change, including on the use of the support received;

135. *Invites* developing country Parties in a position to do so to provide information, through annual submissions to the secretariat and other appropriate channels, on progress made in enhancing their capacity to address climate change, including on the use of the support received;

136. *Requests* the Ad Hoc Working Group on Long-term Cooperative Action under the Convention to consider ways to further enhance the monitoring and review of the effectiveness of capacity-building, for consideration by the Conference of the Parties at its seventeenth session;

137. *Also requests* the Ad Hoc Working Group on Long-term Cooperative Action under the Convention to further elaborate the modalities regarding institutional arrangements for capacity-building, for consideration by the Conference of the Parties at its seventeenth session;

V. Review

138. *Decides* to periodically review the adequacy of the long-term global goal referred to in paragraph 4 above, in the light of the ultimate objective of the Convention, and overall progress towards achieving it, in accordance with the relevant principles and provisions of the Convention;

139. Also decides that:

(a) This review should be guided by the principles of equity, and common but differentiated responsibilities and respective capabilities and take into account, inter alia:

(i) The best available scientific knowledge, including the assessment reports of the Intergovernmental Panel on Climate Change;

(ii) Observed impacts of climate change;

(iii) An assessment of the overall aggregated effect of the steps taken by Parties in order to achieve the ultimate objective of the Convention;

(iv) Consideration of strengthening the long-term global goal, referencing various matters presented by the science, including in relation to temperature rises of 1.5 °C;

(b) The first review should start in 2013 and should be concluded by 2015;

(c) The Conference of the Parties shall take appropriate action based on the review;

140. *Requests* the Ad Hoc Working Group on Long-term Cooperative Action under the Convention to further define the scope of this review and develop its modalities, including the required inputs, with a view to their adoption by the Conference of the Parties at its seventeenth session;

VI. Other matters

Parties included in Annex I to the Convention undergoing the process of transition to a market economy

Recalling Article 4, paragraph 6, of the Convention and relevant decisions of the Conference of the Parties, especially decisions 3/CP.7 and 3/CP.13 relating to Parties included in Annex I to the Convention undergoing the process of transition to a market economy,

Noting that Parties included in Annex I to the Convention undergoing the process of transition to a market economy are not included in Annex II to the Convention and as such are not subject to the provisions of Article 4, paragraphs 3 and 4, of the Convention,

Recalling that Article 4, paragraph 6, of the Convention provides that a certain degree of flexibility shall be allowed by the Conference of the Parties to Parties included in Annex I to the Convention undergoing the process of transition to a market economy,

Taking note of the submissions from Parties contained in document FCCC/AWGLCA/2010/MISC.6/Add.2,

141. *Requests* the Ad Hoc Working Group on Long-term Cooperative Action under the Convention to continue consideration of these issues with a view to promoting access by Parties included in Annex I to the Convention undergoing the process of transition to a market economy to technology, capacity-building and finance in order to enhance their ability to develop low-emission economies;

Parties included in Annex I to the Convention whose special circumstances are recognized by the Conference of the Parties

Recalling decision 26/CP.7 that amended the list in Annex II to the Convention by deleting the name of Turkey,

Recalling decision 26/CP.7 that invited Parties to recognize the special circumstances of Turkey, which place Turkey in a situation different from that of other Parties included in Annex I to the Convention,

Recognizing that Turkey is in a situation different from that of other Parties included in Annex I to the Convention,

Noting that Turkey is not included in Annex II to the Convention and as such is not subject to the commitments of Article 4, paragraphs 3–5, of the Convention and that Turkey is eligible for support under Article 4, paragraph 5, of the Convention,

Taking note of the submission from Turkey contained in document FCCC/AWGLCA/2010/MISC.8,

142. *Requests* the Ad Hoc Working Group on Long-term Cooperative Action under the Convention to continue consideration of these issues with a view to promoting access by Turkey to finance, technology and capacity-building in order to enhance its ability to better implement the Convention;

VII. Extension of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention

143. *Decides* to extend the Ad Hoc Working Group on Long-term Cooperative Action under the Convention for one year, in order for it to continue its work with a view to carrying out the undertakings contained in this decision and present the results to the Conference of the Parties for consideration at its seventeenth session;

144. *Requests* the Ad Hoc Working Group on Long-term Cooperative Action under the Convention to continue its work drawing on the documents under its consideration;

145. *Also requests* the Ad Hoc Working Group on Long-term Cooperative Action under the Convention to continue discussing legal options with the aim of completing an agreed outcome based on decision 1/CP.13 (Bali Action Plan), the work done at the sixteenth session of the Conference of the Parties and proposals made by Parties under Article 17 of the Convention;

146. *Further requests* the secretariat to make the necessary arrangements in accordance with any guidance from the Bureau of the Conference of the Parties;

147. *Mandates* the host country of the next session of the Conference of the Parties to undertake inclusive and transparent consultations in order to facilitate the work towards the success of that session.

Appendix I

Guidance and safeguards for policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries

1. The activities referred to in paragraph 70 of this decision should:

(a) Contribute to the achievement of the objective set out in Article 2 of the Convention;

(b) Contribute to the fulfilment of the commitments set out in Article 4, paragraph 3, of the Convention;

(c) Be country-driven and be considered options available to Parties;

(d) Be consistent with the objective of environmental integrity and take into account the multiple functions of forests and other ecosystems;

(e) Be undertaken in accordance with national development priorities, objectives and circumstances and capabilities and should respect sovereignty;

(f) Be consistent with Parties' national sustainable development needs and goals;

(g) Be implemented in the context of sustainable development and reducing poverty, while responding to climate change;

(h) Be consistent with the adaptation needs of the country;

(i) Be supported by adequate and predictable financial and technology support, including support for capacity-building;

(j) Be results-based;

(k) Promote sustainable management of forests;

2. When undertaking the activities referred to in paragraph 70 of this decision, the following safeguards should be promoted and supported:

(a) That actions complement or are consistent with the objectives of national forest programmes and relevant international conventions and agreements;

(b) Transparent and effective national forest governance structures, taking into account national legislation and sovereignty;

(c) Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples;

(d) The full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities, in the actions referred to in paragraphs 70 and 72 of this decision;

(e) That actions are consistent with the conservation of natural forests and biological diversity, ensuring that the actions referred to in paragraph 70 of this decision are not used for the conversion of natural forests, but are instead used to incentivize the

protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits;[1]

(f) Actions to address the risks of reversals;

(g) Actions to reduce displacement of emissions.

[1] Taking into account the need for sustainable livelihoods of indigenous peoples and local communities and their interdependence on forests in most countries, reflected in the United Nations Declaration on the Rights of Indigenous Peoples, as well as the International Mother Earth Day.

Appendix II

Work programme of the Subsidiary Body for Scientific and Technological Advice on policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries

In the development of its work programme, the Subsidiary Body for Scientific and Technological Advice is requested to:

(a) Identify land use, land-use change and forestry activities in developing countries, in particular those that are linked to the drivers of deforestation and forest degradation, identify the associated methodological issues to estimate emissions and removals resulting from these activities, and assess the potential contribution of these activities to the mitigation of climate change, and report on the findings and outcomes of this work to the Conference of the Parties (COP) at its eighteenth session on the outcomes of the work referred to in this paragraph;

(b) Develop modalities relating to paragraphs 71 (b) and (c) and guidance relating to paragraph 71 (d) of this decision, for consideration by the COP at its seventeenth session;

(c) Develop, as necessary, modalities for measuring, reporting and verifying anthropogenic forest-related emissions by sources and removals by sinks, forest carbon stocks, and forest carbon stock and forest-area changes resulting from the implementation of the activities referred to in paragraph 70 of this decision, consistent with any guidance on measuring, reporting and verifying nationally appropriate mitigation actions by developing country Parties agreed by the COP, taking into account methodological guidance in accordance with decision 4/CP.15, for consideration by the COP at its seventeenth session.

Appendix III

Terms of reference for the design of the Green Climate Fund

1. The Transitional Committee shall develop and recommend to the Conference of the Parties for its approval at its seventeenth session operational documents that address, inter alia:

(a) The legal and institutional arrangements for the establishment and operationalization of the Green Climate Fund;

(b) The rules of procedure of the Green Climate Fund Board and other governance issues related to the Board;

(c) Methods to manage the large scale of financial resources from a number of sources and deliver through a variety of financial instruments, funding windows and access modalities, including direct access, with the objective of achieving a balanced allocation between adaptation and mitigation;

(d) The financial instruments that the Fund can use to achieve its priorities;

(e) Methods to enhance complementarity between the Fund's activities and those of other bilateral, regional and multilateral funding mechanisms and institutions;

(f) The role of the Fund's secretariat and the procedure for selecting and/or establishing the secretariat;

(g) A mechanism to ensure periodic independent evaluation of the Fund's performance;

(h) Mechanisms to ensure financial accountability and to evaluate the performance of activities supported by the Fund, in order to ensure the application of environmental and social safeguards as well as internationally accepted fiduciary standards and sound financial management to the Fund's activities;

(i) Mechanisms to ensure the provision of appropriate expert and technical advice, including from relevant thematic bodies established under the Convention;

(j) Mechanisms to ensure stakeholder input and participation.

2. In the conduct of its work, the Transitional Committee shall:

(a) Convene its first meeting by March 2011;

(b) Encourage input from all Parties and from relevant international organizations and observers;

(c) Take into account the findings contained in relevant reports.

Appendix IV

Composition and mandate of the Technology Executive Committee

1. The Technology Executive Committee shall comprise 20 expert members, elected by the Conference of the Parties (COP), serving in their personal capacity and nominated by Parties with the aim of achieving a fair and balanced representation, as follows:

(a) Nine members from Parties included in Annex I to the Convention (Annex I Parties);

(b) Three members from each of the three regions of the Parties not included in Annex I to the Convention (non-Annex I Parties), namely Africa, Asia and the Pacific, and Latin America and the Caribbean, one member from a small island developing State and one member from a least developed country Party.

2. Decisions will be taken according to the rule of consensus.

3. Parties are encouraged to nominate senior experts to the Technology Executive Committee, with a view to achieving, within the membership, an appropriate balance of technical, legal, policy, social development and financial expertise relevant to the development and transfer of technology for adaptation and mitigation, taking into account the need to achieve gender balance in accordance with decision 36/CP.7.

4. Members shall serve for a term of two years and shall be eligible to serve a maximum of two consecutive terms of office. The following rules shall apply:

(a) Half of the members shall be elected initially for a term of three years and half of the members shall be elected for a term of two years;

(b) Thereafter, the COP shall elect every year a member for a term of two years;

(c) The members shall remain in office until their successors are elected.

5. The Technology Executive Committee shall elect annually a chair and a vice-chair from among its members for a term of one year each, with one being a member from an Annex I Party and the other being a member from a non-Annex I Party. The positions of chair and vice-chair shall alternate annually between a member from an Annex I Party and a member from a non-Annex I Party.

6. If the chair is temporarily unable to fulfil the obligations of the office, the vice-chair shall serve as chair. In the absence of the chair and vice-chair at a particular meeting, any other member designated by the Technology Executive Committee shall temporarily serve as the chair of that meeting.

7. If the chair or vice-chair is unable to complete the term of office, the Technology Executive Committee shall elect a replacement to complete the term of office, taking into account paragraph 5 above.

8. If a member of the Technology Executive Committee resigns or is otherwise unable to complete the assigned term of office or to perform the functions of that office, the Technology Executive Committee may decide, bearing in mind the proximity of the next session of the COP, to appoint another member from the same constituency to replace said member for the remainder of that member's mandate, in which case the appointment shall count as one term.

9. The Technology Executive Committee, in performing its functions, should draw upon outside expertise, including the UNFCCC roster of experts and the Climate

Technology Centre and Network, to provide advice, including as expert advisers at its meetings.

10. The Technology Executive Committee should seek input from intergovernmental and international organizations and the private sector and may seek input from civil society in undertaking its work. It may invite advisers drawn from relevant intergovernmental and international organizations as well as the private sector and civil society to participate in its meetings as expert advisers on specific issues as they arise.

11. The meetings of the Technology Executive Committee shall be open to attendance by accredited observer organizations, except where otherwise decided by the Technology Executive Committee.

12. The secretariat shall support and facilitate the work of the Technology Executive Committee.

9th plenary meeting
10–11 December 2010

Decision 7/CP.17

Work programme on loss and damage

The Conference of the Parties,

Recalling decision 1/CP.16, whereby the Conference of the Parties decided to establish a work programme in order to consider approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change,

Also recalling the conclusions of the Subsidiary Body for Implementation at its thirty-fourth session,[1]

Recognizing the need to strengthen international cooperation and expertise in order to understand and reduce loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather events and slow onset events,

Noting the significant amount of relevant ongoing work within and outside of the Convention process,

Encouraging Parties to make use of the relevant information contained in the *Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation* of the Intergovernmental Panel on Climate Change in considering approaches to address loss and damage, as appropriate,

Recalling the conclusions of the Subsidiary Body for Implementation at its thirty-fourth session, whereby the Subsidiary Body for Implementation took note of the importance of the following three broad thematic areas in the implementation of the work programme on loss and damage: assessing the risk of loss and damage associated with the adverse effects of climate change and the current knowledge on the same; a range of approaches to address loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather events and slow onset events, taking into consideration experience at all levels; and the role of the Convention in enhancing the implementation of approaches to address loss and damage associated with the adverse effects of climate change,

Recognizing the value of national assessments undertaken by developing countries in order to provide national data and a quantification of loss and damage across all sectors associated with extreme weather events and slow onset events of climate change,

1. *Requests* the Subsidiary Body for Implementation to continue the implementation of the work programme on approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change and to make recommendations on loss and damage to the Conference of the Parties for its consideration at its eighteenth session;

2. *Also requests* the Subsidiary Body for Implementation to take into account the questions mentioned in the annex to this decision in implementing the work programme;

3. *Invites* Parties, relevant intergovernmental organizations, regional centres and networks, the private sector, civil society and other relevant stakeholders:

(a) To take into account the three thematic areas[2] when undertaking activities aimed at assisting Parties in enhancing their understanding of, and expertise that will help to address, loss and damage associated with the adverse effects of climate change in

[1] FCCC/SBI/2011/7, paragraphs 106–116.

[2] FCCC/SBI/2011/7, paragraph 109.

developing countries that are particularly vulnerable to the adverse effects of climate change;

(b) To share the outcomes of their activities and provide information thereon, including lessons learned and good practices from the implementation of existing risk assessment and risk management options, with the Subsidiary Body for Implementation at its subsequent sessions, as appropriate;

4. *Agrees* to engage a large and diverse representation of experts, in particular from developing countries, including the least developed countries and small island developing States, in undertaking the work under the thematic areas referred to in paragraph 3(a) above;

5. *Appreciates* the need to explore a range of possible approaches and potential mechanisms, including an international mechanism, to address loss and damage, with a view to making recommendations on loss and damage to the Conference of the Parties for its consideration at its eighteenth session, including elaborating the elements set out in decision 1/CP.16, paragraph 28(a–d);

I. Thematic area 1: Assessing the risk of loss and damage associated with the adverse effects of climate change and the current knowledge on the same

6. *Requests* the Subsidiary Body for Implementation to address issues related to this thematic area at the expert meeting mandated to be held before the thirty-sixth session of the Subsidiary Body for Implementation,[3] taking into account inputs from relevant organizations and other stakeholders, and drawing on expertise within and outside the Convention, with a view to generating an adequate knowledge base for the discussion under thematic area 2, detailed in chapter II below;

7. *Also requests* the secretariat:

(a) To make available the report on the expert meeting referred to in paragraph 6 above for consideration by the Subsidiary Body for Implementation at its thirty-sixth session;

(b) To prepare a technical paper, before the expert meeting mentioned in paragraph 6 above and in collaboration with relevant organizations and other stakeholders, summarizing current knowledge on relevant methodologies, and addressing data requirements as well as lessons learned and gaps identified at different levels, drawing on existing relevant work and documents;

II. Thematic area 2: A range of approaches to address loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather events and slow onset events, taking into consideration experience at all levels

8. *Further requests* the secretariat:

(a) To organize four expert meetings, three at the regional level and one for small island developing States, in conjunction with other related events where possible, reflecting regional priorities and experiences, to be held before the thirty-seventh session of the Subsidiary Body for Implementation, to address issues related to this thematic area,

[3] FCCC/SBI/2011/7, paragraph 111.

taking into account the outcomes of the expert meeting mentioned in paragraph 6 above and the inputs from relevant organizations and other stakeholders within and outside the Convention;

(b) To make available the report on the expert meetings referred to in paragraph 8(a) above for consideration by the Subsidiary Body for Implementation by its thirty-seventh session;

(c) To develop a technical paper on slow onset events, taking into consideration the outcomes of the regional expert meetings mentioned in paragraph 8(a) above;

(d) To conduct, in collaboration with relevant organizations and other stakeholders, and drawing on existing relevant work and documents, a literature review of existing information and case studies on the topics in the context of this thematic area, to feed into the expert meetings mentioned in paragraph 8(a) above;

III. Thematic area 3: The role of the Convention in enhancing the implementation of approaches to address loss and damage associated with the adverse effects of climate change

9. *Invites* Parties and relevant organizations and other stakeholders to submit to the secretariat, by 17 September 2012, taking into account the outcomes of the implementation of the work programme on loss and damage prior to that date, views and information on the possible elements to be included in the recommendations on loss and damage in accordance with decision 1/CP.16;

10. *Requests* the secretariat to compile those submissions into a miscellaneous document to be made available for consideration by the Subsidiary Body for Implementation at its thirty-seventh session;

11. *Also requests* the Subsidiary Body for Implementation to consider issues related to this thematic area at its thirty-seventh session, taking into account the following:

(a) The outcomes of the activities completed prior to the session;

(b) The submissions referred to in paragraph 9 above;

(c) The actions undertaken by relevant organizations and other stakeholders in the context of the work programme;

(d) Inputs from processes relevant to these issues;

12. *Further requests* Parties included in Annex II to the Convention and other developed country Parties in a position to do so to provide financial and technical support, as appropriate, for the implementation of the work programme;

13. *Invites* interested organizations in a position to do so to provide financial and technical support, as appropriate, for the implementation of the activities of the work programme;

14. *Takes note* of the estimated budgetary implications to implement the activities contained in this decision, as provided by the secretariat;

15. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

Annex

Questions

I. Thematic area 1: Assessing the risk of loss and damage associated with the adverse effects of climate change and the current knowledge on the same

1. What are the data and information requirements for assessing impacts and climate risk, at different levels and for a broad range of sectors and ecosystems? What data are available and where are the gaps?

2. What methods and tools are available for risk assessment, including their requirements, strengths and weaknesses, and can they address social and environmental impacts?

3. What are the capacity needs for applying risk assessment methods on the ground, including for facilitating their application in developing countries?

4. How can the results of risk assessments be optimally formulated in order to support decision-making? What are the desired methods for presenting the results of risk assessment exercises so that they drive decision-making?

II. Thematic area 2: A range of approaches to address loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather events and slow onset events, taking into consideration experience at all levels

5. What is the full range of approaches and tools that can be used to address the risk of loss and damage, at all levels and for a broad range of sectors and ecosystems, considering both extreme weather events and slow onset events? Such approaches and tools include, inter alia, conventional, non-conventional and innovative instruments to address specific types of loss and damage in the context of this thematic area, especially those driven by the multiplying, magnifying and intensifying effects of climate change at the national, subnational and local levels. What is known about the relative cost-effectiveness of these tools?

6. What are the foundational resource requirements (e.g. budget, infrastructure, and technical capacity for implementation) in order for different strategies and tools to be effectively applied?

7. What are the lessons learned from existing efforts within both the public and private sectors, considering elements of design, limitations, challenges and best practices?

8. What are the links and synergies between risk reduction and other instruments such as risk transfer? How can comprehensive risk management portfolios or toolkits be designed?

9. How can risk management approaches be tailored to national contexts? How can Parties and other stakeholders evaluate which tools might be most appropriate for their particular risks and circumstances?

10th plenary meeting
9 December 2011

Decision 3/CP.18

Approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change to enhance adaptive capacity

The Conference of the Parties,

Recalling the relevant provisions of the Convention,

Also recalling decisions 1/CP.16 and 7/CP.17 and the relevant conclusions of the Subsidiary Body for Implementation at its thirty-fourth and thirty-sixth sessions,

Recognizing the need to strengthen international cooperation and expertise in order to understand and reduce loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather events and slow onset events,[1]

Highlighting the important and fundamental role of the Convention in addressing loss and damage associated with climate change impacts, especially in developing countries that are particularly vulnerable to the adverse effects of climate change, including by promoting leadership, collaboration and cooperation, at the national, regional and international levels and for a broad range of sectors and ecosystems, in order to enable coherent and synergistic approaches to address such loss and damage,

Noting the relevant work undertaken by other bodies, work programmes and workplans, and processes under the Convention,

Taking note of the relevant knowledge and ongoing work outside of the Convention, including the Special Report of the Intergovernmental Panel on Climate Change, *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*,[2] the *Global Assessment Report on Disaster Risk Reduction*,[3] the Hyogo Framework for Action[4] and the Global Framework for Climate Services of the World Meteorological Organization,

Reaffirming the need for Parties to take precautionary measures, in accordance with the principles and provisions of the Convention, to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects, and underlining that the lack of full scientific certainty should not be used as reason for postponing action,

Appreciating the progress made in the implementation, and the importance of the continuation, of the work programme to address the loss and damage associated with the adverse effects of climate change,

Acknowledging ongoing initiatives relevant to loss and damage associated with the adverse effects of climate change at the national, international and regional levels and that there is a need to scale up these efforts, including by enhancing support and coordination in the broader context of climate-resilient sustainable development,

1. *Acknowledges* the need to enhance support, including finance, technology and capacity-building, for relevant actions;

[1] Decision 1/CP.16, paragraph 25.
[2] <http://ipcc-wg2.gov/SREX/>.
[3] <http://www.preventionweb.net/english/hyogo/gar/2011/en/home/index.html>.
[4] <http://www.unisdr.org/eng/hfa/hfa.htm>.

2. *Notes* that a range of approaches, methods and tools is available to assess the risk of and to respond to loss and damage associated with the adverse effects of climate change, and that their selection depends upon regional, national and local capacity, context and circumstances, and involves the engagement of all relevant stakeholders;

3. *Also notes* that there are important linkages between extreme weather events and slow onset events, and the importance of building comprehensive climate risk management approaches;

4. *Agrees* that comprehensive, inclusive and strategic responses are needed to address loss and damage associated with the adverse effects of climate change;

5. *Also agrees* that the role of the Convention in promoting the implementation of approaches to address loss and damage associated with the adverse effects of climate change includes, inter alia, the following:

(a) Enhancing knowledge and understanding of comprehensive risk management approaches to address loss and damage associated with the adverse effects of climate change, including slow onset impacts;

(b) Strengthening dialogue, coordination, coherence and synergies among relevant stakeholders;

(c) Enhancing action and support, including finance, technology and capacity-building, to address loss and damage associated with the adverse effects of climate change;

6. *Invites* all Parties, taking into account common but differentiated responsibilities and respective capabilities and specific national and regional development priorities, objectives and circumstances, to enhance action on addressing loss and damage associated with the adverse effects of climate change, taking into account national development processes, by undertaking, inter alia, the following:

(a) Assessing the risk of loss and damage associated with the adverse effects of climate change, including slow onset impacts;

(b) Identifying options and designing and implementing country-driven risk management strategies and approaches, including risk reduction, and risk transfer and risk-sharing mechanisms;

(c) The systematic observation of, and data collection on, the impacts of climate change, in particular slow onset impacts, and accounting for losses, as appropriate;

(d) Implementing comprehensive climate risk management approaches, including scaling up and replicating good practices and pilot initiatives;

(e) Promoting an enabling environment that would encourage investment and the involvement of relevant stakeholders in climate risk management;

(f) Involving vulnerable communities and populations, and civil society, the private sector and other relevant stakeholders, in the assessment of and response to loss and damage;

(g) Enhancing access to, sharing and the use of data, at the regional, national and subnational levels, such as hydrometeorological data and metadata, on a voluntary basis, to facilitate the assessment and management of climate-related risk;

7. *Acknowledges* the further work to advance the understanding of and expertise on loss and damage, which includes, inter alia, the following:

(a) Enhancing the understanding of:

(i) The risk of slow onset events, and approaches to address them;

(ii) Non-economic losses and damages;

(iii) How loss and damage associated with the adverse effects of climate change affects those segments of the population that are already vulnerable owing to geography, gender, age, indigenous or minority status, or disability, and how the implementation of approaches to address loss and damage can benefit those segments of the population;

(iv) How to identify and develop appropriate approaches to address loss and damage associated with the adverse effects of climate change, including to address slow onset events and extreme weather events, including through risk reduction, risk sharing and risk transfer tools, and approaches to rehabilitate from loss and damage associated with the adverse effects of climate change;

(v) How approaches to address loss and damage associated with the impacts of climate change may be integrated into climate-resilient development processes;

(vi) How impacts of climate change are affecting patterns of migration, displacement and human mobility;

(b) Strengthening and supporting the collection and management of relevant data, including gender-disaggregated data, for assessing the risk of loss and damage associated with the adverse effects of climate change;

(c) Enhancing coordination, synergies and linkages among various organizations, institutions and frameworks, to enable the development and support of approaches to address loss and damage, including slow onset events and comprehensive climate risk management strategies, including risk transfer tools;

(d) Strengthening and promoting regional collaboration, centres and networks on strategies and approaches, including to address loss and damage associated with the adverse effects of climate change, including slow onset events, including through risk reduction, risk sharing and risk transfer initiatives;

(e) Enhanced capacity-building at the national and regional levels to address loss and damage associated with the adverse effects of climate change;

(f) Strengthening institutional arrangements at the national, regional and international levels to address loss and damage associated with the adverse effects of climate change;

8. *Requests* developed country Parties to provide developing country Parties with finance, technology and capacity-building, in accordance with decision 1/CP.16 and other relevant decisions of the Conference of the Parties;

9. *Decides* to establish, at its nineteenth session, institutional arrangements, such as an international mechanism, including functions and modalities, elaborated in accordance with the role of the Convention as defined in paragraph 5 above, to address loss and damage associated with the impacts of climate change in developing countries that are particularly vulnerable to the adverse effects of climate change;

10. *Requests* the secretariat to carry out the following interim activities under the work programme on loss and damage, prior to the thirty-ninth session of the Subsidiary Body for Implementation:

(a) An expert meeting to consider future needs, including capacity needs associated with possible approaches to address slow onset events, and to prepare a report for consideration by the Subsidiary Body for Implementation at its thirty-ninth session;

(b) Preparation of a technical paper on non-economic losses;

(c) Preparation of a technical paper on gaps in existing institutional arrangements within and outside of the Convention to address loss and damage, including those related to slow onset events;

11. *Requests* the Subsidiary Body for Implementation to consider the technical paper referred to in paragraph 10(c) above in developing the arrangements referred to in paragraph 9 above;

12. *Also requests* the Subsidiary Body for Implementation to elaborate, at its thirty-eighth session, activities under the work programme on loss and damage, to further the understanding of and expertise on loss and damage associated with the adverse effects of climate change, taking into account the provisions contained in paragraph 7 above;

13. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat pursuant to the provisions contained in this decision;

14. *Further requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources; in the absence of adequate additional funding, as indicated in the budgetary estimates referred to above, the secretariat may not be in a position to undertake the requested activities.

9th plenary meeting
8 December 2012

Decision 2/CP.19

Warsaw international mechanism for loss and damage associated with climate change impacts

The Conference of the Parties,

Recalling the relevant provisions of the Convention,

Also recalling decisions 1/CP.16, 7/CP.17 and 3/CP.18,

Acknowledging the contribution of adaptation and risk management strategies towards addressing loss and damage associated with climate change impacts,

Also acknowledging that loss and damage associated with the adverse effects of climate change includes, and in some cases involves more than, that which can be reduced by adaptation,

Recalling its decision to establish, at its nineteenth session, institutional arrangements, such as an international mechanism, including functions and modalities, to address loss and damage associated with the impacts of climate change in developing countries that are particularly vulnerable to the adverse effects of climate change,[1]

1. *Establishes* the Warsaw international mechanism for loss and damage, under the Cancun Adaptation Framework, subject to review at the twenty-second session of the Conference of the Parties (November–December 2016) pursuant to paragraph 15 below, to address loss and damage associated with impacts of climate change, including extreme events and slow onset events, in developing countries that are particularly vulnerable to the adverse effects of climate change (hereinafter referred to as the Warsaw international mechanism), and in line with the provisions contained in paragraphs 2–15 below;

2. *Also establishes* an executive committee of the Warsaw international mechanism, which shall function under the guidance of, and be accountable to, the Conference of the Parties, to guide the implementation of functions referred to under paragraph 5 below;

3. *Requests* the executive committee to report annually to the Conference of the Parties through the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation and make recommendations, as appropriate;

4. *Decides* that, as an interim measure, the executive committee shall consist of two representatives from each of the following bodies under the Convention, ensuring that there is a balanced representation between developed and developing country Parties: the Adaptation Committee, the Least Developed Countries Expert Group, the Standing Committee on Finance, the Technology Executive Committee and the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention;

5. *Also decides* that the Warsaw international mechanism shall fulfil the role under the Convention of promoting the implementation of approaches to address loss and damage associated with the adverse effects of climate change, pursuant to decision 3/CP.18, in a comprehensive, integrated and coherent manner by undertaking, inter alia, the following functions:

(a) Enhancing knowledge and understanding of comprehensive risk management approaches to address loss and damage associated with the adverse effects of climate change, including slow onset impacts, by facilitating and promoting:

[1] Decision 3/CP.18, paragraph 9.

(i) Action to address gaps in the understanding of and expertise in approaches to address loss and damage associated with the adverse effects of climate change, including, inter alia, the areas outlined in decision 3/CP.18, paragraph 7(a);

(ii) Collection, sharing, management and use of relevant data and information, including gender-disaggregated data;

(iii) Provision of overviews of best practices, challenges, experiences and lessons learned in undertaking approaches to address loss and damage;

(b) Strengthening dialogue, coordination, coherence and synergies among relevant stakeholders by:

(i) Providing leadership and coordination and, as and where appropriate, oversight under the Convention, on the assessment and implementation of approaches to address loss and damage associated with the impacts of climate change from extreme events and slow onset events associated with the adverse effects of climate change;

(ii) Fostering dialogue, coordination, coherence and synergies among all relevant stakeholders, institutions, bodies, processes and initiatives outside the Convention, with a view to promoting cooperation and collaboration across relevant work and activities at all levels;[2]

(c) Enhancing action and support, including finance, technology and capacity-building, to address loss and damage associated with the adverse effects of climate change, so as to enable countries to undertake actions pursuant to decision 3/CP.18, paragraph 6, including by:

(i) Providing technical support and guidance on approaches to address loss and damage associated with climate change impacts, including extreme events and slow onset events;

(ii) Providing information and recommendations for consideration by the Conference of the Parties when providing guidance relevant to reducing the risks of loss and damage and, where necessary, addressing loss and damage, including to the operating entities of the financial mechanism of the Convention, as appropriate;

(iii) Facilitating the mobilization and securing of expertise, and enhancement of support, including finance, technology and capacity-building, to strengthen existing approaches and, where necessary, facilitate the development and implementation of additional approaches to address loss and damage associated with climate change impacts, including extreme weather events and slow onset events;

6. *Further decides* that the Warsaw international mechanism should complement, draw upon the work of and involve, as appropriate, existing bodies and expert groups under the Convention, as well as on that of relevant organizations and expert bodies outside the Convention, at all levels;

7. *Decides* that, in exercising the functions outlined in paragraph 5 above, the Warsaw international mechanism will, inter alia:

(a) Facilitate support of actions to address loss and damage;

(b) Improve coordination of the relevant work of existing bodies under the Convention;

(c) Convene meetings of relevant experts and stakeholders;

(d) Promote the development of, and compile, analyse, synthesize and review information;

[2] All levels refer to national, regional and international levels.

(e) Provide technical guidance and support;

(f) Make recommendations, as appropriate, on how to enhance engagement, actions and coherence under and outside the Convention, including on how to mobilize resources and expertise at different levels;

8. *Invites* the Executive Secretary, in consultation with the President of the Conference of the Parties, to convene the initial meeting of the executive committee by March 2014, the meetings of which will be open to observers, and invite representatives of relevant international and regional organizations having the necessary skills in approaches to addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events;

9. *Requests* the executive committee to develop its initial two-year workplan for the implementation of the functions outlined in paragraph 5 above, including the scheduling of meetings, taking into account the issues outlined in decision 3/CP.18, paragraphs 6 and 7, for consideration at the forty-first sessions of the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation (December 2014);

10. *Also requests* the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation to consider the composition of, and procedures for, the executive committee, and to make recommendations thereon for adoption by the Conference of the Parties at its twentieth session (December 2014), with a view to finalizing the organization and governance of the executive committee;

11. *Invites* relevant international and regional organizations, institutions and processes to integrate, where appropriate, measures to address the impacts of climate change and to explore and strengthen synergies in the context of addressing loss and damage associated with the adverse impacts of climate change, especially in particularly vulnerable developing countries;

12. *Also invites* Parties to work through the United Nations and other relevant institutions, specialized agencies and processes, as appropriate, to promote coherence at all levels in approaches relevant to addressing loss and damage associated with the adverse effects of climate change, including extreme events and slow onset events;

13. *Further invites* Parties to strengthen and, where appropriate, develop institutions and networks at the regional and national levels, especially in particularly vulnerable developing countries, to enhance the implementation of relevant approaches to addressing loss and damage in a manner that is country-driven, encourages cooperation and coordination between relevant stakeholders and improves the flow of information;

14. *Requests* developed country Parties to provide developing country Parties with finance, technology and capacity-building, in accordance with decision 1/CP.16 and other relevant decisions of the Conference of the Parties;

15. *Decides* to review the Warsaw international mechanism, including its structure, mandate and effectiveness, at the twenty-second session of the Conference of the Parties, with a view to adopting an appropriate decision on the outcome of this review;

16. *Takes note* of the budgetary implications of the activities to be undertaken by the secretariat pursuant to the provisions contained in this decision;

17. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

10th plenary meeting
23 November 2013

Decision 18/CP.20

Lima work programme on gender

The Conference of the Parties,

Recalling decisions 36/CP.7, 1/CP.16 and 23/CP.18 on improving the participation of women in Convention negotiations and in the representation of Parties in bodies established under the Convention,

Underscoring the importance of coherence between gender-responsive climate policies and balanced participation of women and men in the Convention process, and the provisions of international instruments such as the Convention on the Elimination of All Forms of Discrimination against Women and the Beijing Declaration and Platform for Action,

Acknowledging the progress made in advancing gender balance and gender equality within the context of climate change policies and in line with the individual country circumstances and gender-responsive climate policy through the decisions referred to above, and the need for gender mainstreaming through all relevant targets and goals in activities under the Convention as an important contribution to increase their effectiveness,

Noting that, notwithstanding the progress made by Parties in implementing the decisions referred to above, there is a need for women to be represented in all aspects of the Convention process, including through membership of their national delegations and the chairing and facilitation of formal and informal negotiating groups,

Also noting that gender-responsive climate policy still requires further strengthening in all activities related to adaptation and mitigation as well as decision-making on the implementation of climate policies,

1. *Decides* to enhance the implementation of decisions 36/CP.7, 1/CP.16 and 23/CP.18 by inviting Parties to advance gender balance, promote gender sensitivity in developing and implementing climate policy, and achieve gender-responsive climate policy in all relevant activities under the Convention;

2. *Also decides* that additional efforts need to be made by Parties to improve the participation of women in their delegations and in all of the bodies established under the Convention, as stipulated in decisions 36/CP.7 and 23/CP.18;

3. *Further decides* to establish a two-year work programme for promoting gender balance and achieving gender-responsive climate policy, developed for the purpose of guiding the effective participation of women in the bodies established under the Convention, the elements of which are contained in paragraphs 4 to 7 below;

4. *Requests* the secretariat to include in its next annual report, as referred to in decision 23/CP.18, paragraph 8, information regarding the implementation by the secretariat of those decisions that include a gender approach, in keeping with applicable gender-related policies under the Convention;

5. *Decides* to strengthen the existing work on gender balance in the thematic priority areas set out in paragraphs 6 to 12 below;

6. *Encourages* Parties to support (a) training and awareness-raising for female and male delegates on issues related to gender balance and climate change, and (b) building the skills and capacity of their female delegates to effectively participate in UNFCCC meetings via training on, inter alia, negotiation skills, drafting of legal language and strategic communication;

7. *Also encourages* interested Parties and relevant organizations to support these training and capacity-building efforts, particularly for delegates from Parties that are particularly vulnerable to the adverse effects of climate change, including the least developed countries, small island developing States and countries in Africa;

8. *Requests* the secretariat to support the organization of these training and capacity-building efforts, inter alia, in conjunction with sessions of the subsidiary bodies;

9. *Invites* Parties to increase the representation of women and active participation of women in the bodies established under the Convention;

10. *Decides* to clarify the meaning of the term "gender-responsive climate policy" from an implementation perspective, and improve the development and effective implementation of gender-responsive climate policy;

11. *Requests* the secretariat to organize an in-session workshop on gender-responsive climate policy with a focus on mitigation action and technology development and transfer during the forty-second session of the Subsidiary Body for Implementation (June 2015), and prepare a report on the workshop for consideration at its forty-third session (November–December 2015);

12. *Also requests* the secretariat to organize an in-session workshop on gender-responsive climate policy with a focus on adaptation and capacity-building, and training for delegates on gender issues during the forty-fourth session of the Subsidiary Body for Implementation (May 2016) and prepare a report on the workshop for consideration at its forty-fifth session (November 2016). Future work could include in-session workshops on other themes;

13. *Invites* Parties and admitted observer organizations to submit to the secretariat, by 18 February 2015 and 3 February 2016, respectively, their views on the matters to be addressed at the in-session workshops referred to in paragraphs 11 and 12 above;

14. *Requests* the secretariat to prepare a technical paper on guidelines or other tools on integrating gender considerations into climate change related activities under the Convention for consideration by the Subsidiary Body for Implementation at its forty-fourth session;

15. *Invites* Parties and admitted observer organizations to provide information on progress made in meeting the goals of achieving gender balance and gender-responsive climate policy;

16. *Agrees* to review this information at its twenty-second session (November 2016) with a view to taking any necessary action needed to strengthen the progress of furthering these goals;

17. *Requests* the Executive Secretary to appoint a senior gender focal point, who is an expert in this subject matter, to develop and ensure the implementation of, within existing resources, an action plan for the two-year work programme on gender and climate change;

18. *Invites* Parties and relevant organizations to provide the means for implementing gender-related activities within the two-year work programme;

19. *Takes note* of the budgetary implications of the activities to be undertaken by the secretariat referred to in this decision;

20. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

10th plenary meeting
12 December 2014

Decision 3/CP.23

Establishment of a gender action plan

The Conference of the Parties,

Recalling decisions 36/CP.7, 1/CP.16, 23/CP.18, 18/CP.20, 1/CP.21 and 21/CP.22, as well as the Paris Agreement,

Reaffirming the General Assembly resolution on the 2030 Agenda for Sustainable Development,

Noting that gender-responsive climate policy continues to require further strengthening in all activities concerning adaptation, mitigation and related means of implementation (finance, technology development and transfer, and capacity-building), as well as decision-making on the implementation of climate policies,[1]

Also noting that, notwithstanding the progress made by Parties in implementing the decisions referred to above, there is a need for women to be represented in all aspects of the Convention process and a need for gender mainstreaming through all relevant targets and goals in activities under the Convention as an important contribution to increasing their effectiveness,

Acknowledging with appreciation the important role of the extended Lima work programme on gender in integrating gender considerations into the work of Parties and the secretariat in implementing the Convention, and the role of the gender action plan (contained in the annex) in supporting the implementation of gender-related decisions and mandates under the UNFCCC process,

Recalling decision 21/CP.22, paragraph 27, which mandated the development of a gender action plan in order to support the implementation of gender-related decisions and mandates under the UNFCCC process, which may include priority areas, key activities and indicators, timelines for implementation, responsible and key actors and indicative resource requirements for each activity, and the further elaboration of its review and monitoring processes,

Also recalling that Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights as well as gender equality,

Taking into account the imperative of a just transition of the workforce when implementing the gender action plan,

1. *Adopts* the gender action plan, contained in the annex, under the Lima work programme on gender;

2. *Invites* Parties, members of constituted bodies, United Nations organizations, observers and other stakeholders to participate and engage in implementing the gender action plan with a view to advancing towards the goal of mainstreaming a gender perspective in all elements of climate action;

3. *Welcomes* the technical paper prepared by the secretariat on achieving the goal of gender balance;[2]

4. *Notes* the lack of progress made in delegations and constituted bodies towards the goal of gender balance;

5. *Requests* the secretariat to prepare, for consideration by the Subsidiary Body for Implementation at its session to be held in November 2019, a synthesis report on the

[1] Decision 21/CP.22.

[2] FCCC/TP/2017/8.

implementation of the gender action plan, identifying areas of progress, areas for improvement and further work to be undertaken in subsequent action plans, so as to elaborate recommendations for consideration by the Conference of the Parties at its twenty-fifth session (November 2019) in the context of the review referred to in paragraph 7 below;

6. *Decides* that the topics of the annual in-session workshops to be held in conjunction with the sessions of the subsidiary bodies taking place in the first sessional period of 2018 and 2019[3] will be based on the submission referred to in activity E.1 of priority area E of the gender action plan (see table 5) and on the short- and long-term impacts of the gender action plan, which may also be informed by the synthesis report referred to in paragraph 5 above, respectively;

7. *Also decides* to review, at its twenty-fifth session, the implementation of the gender action plan in the context of the review of the Lima work programme on gender[4] so as to consider the next steps, including an assessment of the impacts of the gender action plan;

8. *Invites* Parties and relevant organizations to participate and engage in the implementation of gender-related activities within the gender action plan, including enhancing the capacity of the gender focal point of the secretariat;

9. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in paragraphs 1, 5 and 6 above;

10. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

[3] Decision 21/CP.22, paragraphs 11 and 12.

[4] Decision 21/CP.22, paragraph 6.

Annex

Gender action plan

1. By decision 21/CP.22, paragraph 27, the Subsidiary Body for Implementation was requested to develop a gender action plan (GAP) in order to support the implementation of gender-related decisions and mandates in the UNFCCC process, which may include priority areas, key activities and indicators, timelines for implementation, responsible and key actors and indicative resource requirements for each activity, and to further elaborate its review and monitoring processes.

2. The GAP, created under the Lima work programme on gender, seeks to advance women's full, equal and meaningful participation and promote gender-responsive climate policy and the mainstreaming of a gender perspective in the implementation of the Convention and the work of Parties, the secretariat, United Nations entities and all stakeholders at all levels.

3. Gender-responsive climate policy requires further strengthening in all activities concerning adaptation, mitigation and related means of implementation (finance, technology development and transfer, and capacity-building) as well as decision-making on the implementation of climate policies. The GAP recognizes the need for women to be represented in all aspects of the UNFCCC process and the need for gender mainstreaming through all relevant targets and goals in activities under the Convention as an important contribution to increasing their effectiveness.

4. The GAP recognizes that gender-related action is being progressed across all areas of the Convention and with respect to the Paris Agreement. Many of the activities in the GAP have been the subject of action by a variety of relevant organizations and will continue to require further action beyond the time frame of the plan.

5. The activities in the GAP vary in terms of measurability, and Parties are at various stages in terms of progress on this agenda. Some actions may be afforded differing degrees of prioritization according to the nature and scale of the climate policies being implemented and the capacities of Parties. The GAP recognizes that climate action under the Convention is a Party-driven process.

Priority areas

6. Parties, the secretariat and relevant organizations are invited to undertake the activities contained in the GAP, as appropriate. The GAP sets out, in five priority areas, the activities that will drive the achievement of its objectives.

A. Capacity-building, knowledge-sharing and communication

7. The GAP seeks to enhance the understanding and expertise of stakeholders on the systematic integration of gender considerations and the application of such understanding and expertise in the thematic areas under the Convention and the Paris Agreement and in policies, programmes and projects on the ground.

B. Gender balance, participation and women's leadership

8. The GAP seeks to achieve and sustain the full, equal and meaningful participation of women in the UNFCCC process.

C. Coherence

9. The GAP seeks to strengthen the integration of gender considerations within the work of UNFCCC bodies, the secretariat and other United Nation entities and stakeholders towards the consistent implementation of gender-related mandates and activities.

D. Gender-responsive implementation and means of implementation

10. The GAP aims to ensure the respect, promotion and consideration of gender equality and the empowerment of women in the implementation of the Convention and the Paris Agreement.

E. Monitoring and reporting

11. The GAP seeks to improve tracking in relation to the implementation of and reporting on gender-related mandates under the UNFCCC.

Table 1
Priority area A: capacity-building, knowledge-sharing and communication

Activity	*Responsible actors*	*Timeline*	*Deliverables*
A.1 Through the use of such mechanisms as workshops, technical assistance, etc., enhance the capacity of Parties and stakeholders to develop gender-responsive policies, plans and programmes on adaptation, mitigation, capacity-building, technology and finance	Parties, United Nations entities and relevant organizations	2018	Gender-responsive climate policies, plans and programmes
A.2 Make a submission on the systematic integration of gender-sensitive and participatory education, training, public awareness, public participation and public access to information from national to local level into all mitigation and adaptation activities implemented under the Convention and the Paris Agreement, including into the implementation of nationally determined contributions and the formulation of long-term low greenhouse gas emission development strategies, and invite Parties to hold a dialogue under the Action for Climate Empowerment agenda item of the Subsidiary Body for Implementation on how Parties and observer organizations have promoted the systematic integration of gender considerations into the above-mentioned issues	Parties and observer organizations, secretariat gender focal point, and the Paris Committee on Capacity-building	2018	Submissions and dialogue

Table 2
Priority area B: gender balance, participation and women's leadership

Activity	*Responsible actors*	*Timeline*	*Deliverables*
B.1 Promote travel funds as a means to support the participation of women in national delegations at UNFCCC sessions, including those from grass-roots, local and indigenous peoples communities from developing countries, the least developed countries and small island developing States	Parties, secretariat and observer organizations	2018–2019	Promotion of funds
B.2 Include in regular notifications to Parties at the time of nominations to UNFCCC bodies the latest report on the gender composition of the relevant body	Secretariat	2018–2019	Updated information on gender balance at the time of nominations to bodies
B.3 Organize and conduct capacity-building training on leadership, negotiation, facilitation and chairing in the context of the UNFCCC process in conjunction with United Nations system-wide efforts for women	Parties, United Nations entities and relevant organizations		Provision of training
B.4 Cooperate in, promote, facilitate, develop and implement formal and non-formal education and training programmes focused on climate change at all levels, targeting women and youth in	Parties, United Nations entities and relevant organizations		Training programmes

Activity	*Responsible actors*	*Timeline*	*Deliverables*
particular at the national, regional and local levels, including the exchange or secondment of personnel to train experts			

Table 3
Priority area C: coherence

Activity	*Responsible actors*	*Timeline*	*Deliverables*
C.1 At SBI 48 hold a dialogue, open to Parties and observers, with the chairs of UNFCCC constituted bodies to discuss the outcomes of the technical paper on entry points requested in decision 21/CP.22, paragraph 13, and any potential recommendations	Secretariat	SBI 48	Dialogue
C.2 Provide capacity-building to chairs and members of UNFCCC constituted bodies and technical teams of the secretariat on how to integrate gender considerations into their respective areas of work and on meeting the goal of gender balance	Secretariat gender team, United Nations entities, other stakeholders and relevant organizations		Chairs and members of UNFCCC constituted bodies supporting the integration of gender into their work Provision of capacity-building
C.3 Share information on efforts made to support the implementation of activities to enhance synergies with other United Nations entities and processes, paying particular attention to the 2030 Agenda for Sustainable Development	United Nations entities and other relevant organizations	During sessions of the COP	Promotion of efforts

Abbreviations: COP = Conference of the Parties, SBI = Subsidiary Body for Implementation.

Table 4
Priority area D: gender-responsive implementation and means of implementation

Activity	*Responsible actors*	*Timeline*	*Deliverables*
D.1 Invite the Standing Committee on Finance to host a dialogue on the implementation of its commitment to integrate gender considerations into its work, emphasizing the relevance of gender-responsive access to finance in the implementation of climate action	Standing Committee on Finance	2019	Dialogue
D.2 In cooperation with the UNEP DTU Partnership[a] and the Climate Technology Centre and Network, invite interested stakeholders to share information on the incorporation of gender into technology needs assessments during Gender Day	Parties, UNEP DTU Partnership, Climate Technology Centre and Network, other relevant stakeholders and secretariat	2018–2019	Submissions
D.3 Strengthen the capacity of gender mechanisms, including for parliamentarians, the International Parliamentary Union, commissions, funding ministries, non-governmental organizations and civil society organizations, for the integration of gender-responsive budgeting into climate finance, access and delivery through training, expert workshops, technical papers and tools	Parties, United Nations entities, the Financial Mechanism and other stakeholders	2018	Capacity-building

[a] The partnership, formerly known as the United Nations Environment Programme (UNEP) Risoe Centre, operates under a tripartite agreement between Denmark's Ministry of Foreign Affairs, the Technical University of Denmark (DTU) and UNEP.

Table 5
Priority area E: monitoring and reporting

Activity	*Responsible actors*	*Timeline*	*Deliverables*
E.1 Make a submission on the following, including sex-disaggregated data and gender analysis, where applicable: (a) Information on the differentiated impacts of climate change on women and men, with special attention paid to local communities and indigenous peoples; (b) Integration of gender considerations into adaptation, mitigation, capacity-building, Action for Climate Empowerment, technology and finance policies, plans and actions; (c) Policies and plans for and progress made in enhancing gender balance in national climate delegations	Parties and observer organizations	2018	Submission
E.2 Prepare a synthesis report on the submissions received under activity E.1	Secretariat	2019	Synthesis report
E.3 Update the report on how the Climate Technology Centre and Network, in executing its modalities and procedures, working in conjunction with the Technology Executive Committee (to ensure coherence and synergy within the Technology Mechanism), has contributed to the aim of accelerating the development and transfer of technology, taking into account gender considerations	Climate Technology Centre and Network and Technology Executive Committee		Report, with recommendations
E.4 Encourage knowledge exchange activities among the secretariat staff across all thematic areas to update on work related to gender	Secretariat, in cooperation with United Nations entities, including the United Nations Entity for Gender Equality and the Empowerment of Women		Report on the knowledge exchange Account of exchange activities

12th plenary meeting
17 November 2017

Decision 10/CP.24

Report of the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts

The Conference of the Parties,

Recalling decisions 3/CP.18, 2/CP.19 and 2/CP.20,

Also recalling Article 8 of the Paris Agreement,

Further recalling decision 4/CP.22, in which it recommended that a review of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts be held in 2019 and a technical paper be prepared as input, as well as that the subsidiary bodies finalize terms of reference for the review at their fiftieth sessions (June 2019),

Recalling decision 5/CP.23, in which it invited Parties, relevant organizations and other stakeholders to submit their views and inputs, by 1 February 2019, on possible elements to be included in the terms of reference for the review, for consideration by the subsidiary bodies at their sessions to be held in June 2019,

Noting the Intergovernmental Panel on Climate Change Special Report on Global Warming of 1.5 °C,[1]

1. *Welcomes*:

(a) The annual report of the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts;[2]

(b) The progress made by the Executive Committee in implementing its five-year rolling workplan;[3]

(c) The report of the task force on displacement[4] and its comprehensive assessment of broader issues of displacement related to climate change in response to decision 1/CP.21, paragraph 49;

(d) The report of the Suva expert dialogue,[5] noting the role of the dialogue in informing the preparation of the technical paper referred to in decision 4/CP.22, paragraph 2(f);

2. *Notes with appreciation* the work undertaken by the organizations[6] comprising the task force on displacement in response to decision 1/CP.21, paragraph 49;

3. *Invites* Parties, bodies under the Convention and the Paris Agreement, United Nations agencies and relevant stakeholders to consider the recommendations contained in the annex when undertaking relevant work, as appropriate;

[1] Intergovernmental Panel on Climate Change. 2018. *Global Warming of 1.5 °C: An IPCC Special Report on the impacts of global warming of 1.5 °C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. Available at http://ipcc.ch/report/sr15/.

[2] FCCC/SB/2018/1.

[3] Contained in the annex to document FCCC/SB/2017/1/Add.1.

[4] Available at http://unfccc.int/node/285.

[5] Available at https://unfccc.int/node/182364.

[6] The names of the organizations comprising the task force on displacement are listed in the annex.

4. *Welcomes* the decision[7] of the Executive Committee to extend the mandate of the task force on displacement in accordance with terms of reference to be elaborated by the Executive Committee at its next meeting;

5. *Encourages* the Executive Committee:

(a) To seek ways to continue enhancing its responsiveness, effectiveness and performance in implementing activities in its five-year rolling workplan, particularly those under workstream (e);[8]

(b) To continue its work on human mobility under strategic workstream (d) of its five-year rolling workplan,[9] including by considering the activities set out in paragraphs 38 and 39 of its report referred to in paragraph 1(a) above;

(c) To draw upon the work, information and expertise of bodies under the Convention and the Paris Agreement, as well as international processes, such as the 2030 Agenda for Sustainable Development and the Sendai Framework for Disaster Risk Reduction 2015–2030, including when executing its work through the technical expert group on comprehensive risk management established under workstream (c) of the five-year rolling workplan;[10]

(d) To continue consideration of scientific information needs and knowledge gaps with the Intergovernmental Panel on Climate Change and other scientific organizations;

(e) To increase its consideration of groups vulnerable to the adverse impacts of climate change when implementing its five-year rolling workplan;

6. *Also encourages* Parties and *invites* relevant organizations to make available sufficient resources for the successful and timely implementation of the five-year rolling workplan of the Executive Committee, including, as applicable, the associated expert groups, subcommittees, panels, thematic advisory groups and task-focused ad hoc working groups;

7. *Expresses* its appreciation to the organizers of and participants in the Suva expert dialogue, held during the first part of the forty-eighth sessions of the subsidiary bodies under the guidance of the Executive Committee and the Chair of the Subsidiary Body for Implementation;

8. *Invites* relevant organizations and other stakeholders to collaborate with the Executive Committee, including through partnerships, in developing and disseminating products that support national focal points, loss and damage contact points and other relevant entities in raising awareness of averting, minimizing and addressing loss and damage;

9. *Takes note* of the assistance provided by the Executive Committee to the secretariat in determining the scope of the technical paper referred to in decision 4/CP.22, paragraph 2(f);

10. *Invites* Parties:

(a) To consider developing policies, plans and strategies, as appropriate, and to facilitate coordinated action and the monitoring of progress, where applicable, in their efforts to avert, minimize and address loss and damage;

(b) To take into consideration future climate risks when developing and implementing their relevant national plans and strategies that seek to avert, minimize and address loss and damage and reduce disaster risks, as appropriate;

[7] See document FCCC/SB/2018/1, paragraph 36.

[8] Strategic workstream (e): enhanced cooperation and facilitation in relation to action and support, including finance, technology and capacity-building, to address loss and damage associated with the adverse effects of climate change.

[9] Strategic workstream (d): enhanced cooperation and facilitation in relation to human mobility, including migration, displacement and planned relocation.

[10] Strategic workstream (c): enhanced cooperation and facilitation in relation to comprehensive risk management approaches.

11. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in this decision;

12. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

Annex

Recommendations from the report of the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts on integrated approaches to averting, minimizing and addressing displacement related to the adverse impacts of climate change

1. The following recommendations of the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts are based on the work of the task force on displacement, established by the Executive Committee in response to decision 1/CP.21, paragraph 49:

(a) Acknowledge the inputs and contributions from participants of the stakeholder consultation workshop of the task force on displacement organized by the International Organization for Migration and the Platform on Disaster Displacement, and submissions from others;

(b) Take note of the report on the stakeholder consultation workshop of the task force on displacement;

(c) Strengthen coordination, coherence and collaboration across relevant bodies under the Convention and the Paris Agreement, and institutional arrangements, programmes and platforms, with a view to enhancing understanding of human mobility (including migration, displacement and planned relocation), both internal and cross-border, in the context of climate change, as they undertake their work, and in collaboration with the Executive Committee;

(d) Invite bodies under the Convention and the Paris Agreement, as appropriate and in accordance with their mandates and workplans, to facilitate the efforts of countries to, inter alia, develop climate change related risk assessments and improved standards for data collection on and analyses of internal and cross-border human mobility in a manner that includes the participation of communities affected by and at risk of displacement related to the adverse impacts of climate change;

(e) Invite the Adaptation Committee and the Least Developed Countries Expert Group, in accordance with their mandates and workplans, and in collaboration with the Executive Committee, to assist developing country Parties in integrating approaches to avert, minimize and address displacement related to the adverse impacts of climate change into relevant national planning processes, including the process to formulate and implement national adaptation plans, as appropriate;

(f) Invite Parties to facilitate the efforts of developing country Parties in the implementation of paragraph 2(g) below, as appropriate;

(g) Invite Parties:

(i) To consider formulating laws, policies and strategies, as appropriate, that reflect the importance of integrated approaches to avert, minimize and address displacement related to the adverse impacts of climate change and in the broader context of human mobility, taking into consideration their respective human rights obligations and, as appropriate, other relevant international standards and legal considerations;

(ii) To enhance research, data collection, risk analysis and sharing of information to better map, understand and manage human mobility related to the adverse impacts of climate change in a manner that includes the participation of communities affected and at risk of displacement related to the adverse impacts of climate change;

(iii) To strengthen preparedness, including early warning systems, contingency planning, evacuation planning and resilience-building strategies and plans, and

develop innovative approaches, such as forecast-based financing,[1] to avert, minimize and address displacement related to the adverse impacts of climate change;

(iv) To integrate climate change related human mobility challenges and opportunities into national planning processes, as appropriate, by drawing on available tools, guidance and good practices, and consider communicating these efforts undertaken, as appropriate;

(v) To recall the guiding principles on internal displacement and seek to strengthen efforts to find durable solutions for internally displaced people when working to implement integrated approaches to avert, minimize and address displacement related to the adverse impacts of climate change, as appropriate;

(vi) To facilitate orderly, safe, regular and responsible migration and mobility of people,[2] as appropriate and in accordance with national laws and policies, in the context of climate change, by considering the needs of migrants and displaced persons, communities of origin, transit and destination, and by enhancing opportunities for regular migration pathways, including through labour mobility, consistent with international labour standards, as appropriate;

(h) Invite United Nations agencies, relevant organizations and other stakeholders, as appropriate and in accordance with their respective mandates:

(i) To continue supporting efforts, including finance, technology and capacity-building, of Parties and other actors, including with and for communities and local actors, in order to avert, minimize and address displacement related to the adverse impacts of climate change, at all levels, including the community, national, regional and international levels;

(ii) To support and enhance regional, subregional and transboundary cooperation, in relation to averting, minimizing and addressing displacement related to the adverse impacts of climate change, including for risk and vulnerability assessments, mapping, data analysis, preparedness and early warning systems;

(iii) To continue developing and sharing good practices, tools and guidance in relation to averting, minimizing and addressing displacement related to the adverse impacts of climate change, inter alia, in:

a. Understanding risk;

b. Accessing support, including finance, technology and capacity-building;

c. Providing assistance to, and protection of, within existing national laws and international protocols and conventions, as applicable, affected individuals and communities;

d. Applying international legal instruments and normative frameworks, as appropriate;

(i) Invite relevant United Nations agencies and other relevant stakeholders to provide the Executive Committee with information arising from their activities undertaken in relation to the work referred to in paragraph 1(h) above with a view to informing the work and future action of the Executive Committee and its expert groups, Parties and other stakeholders;

(j) Invite relevant United Nations agencies and other stakeholders to engage with bodies under the Convention, especially the Executive Committee, when facilitating the efforts of States to address challenges and opportunities associated with climate change related human mobility, including the Global Compact for Migration and the work of the international migration review forum, the United Nations Network on Migration and other

[1] Forecast-based financing systems link climate and meteorological data with early warning systems and early action. They can play a supportive role in averting, minimizing and addressing impacts, including displacement, in the context of climate change.

[2] See United Nations General Assembly document A/RES/70/1.

relevant international frameworks and programmes of action, as appropriate, to avoid duplication on climate change aspects;

(k) Invite the Secretary-General to consider steps, including a system-wide strategic review, for greater coherence in the United Nations system to address human mobility in the context of climate change, and to facilitate the inclusion of integrated approaches to avert, minimize and address displacement related to the adverse impacts of climate change in the work of the envisaged high-level panel on internally displaced persons, as appropriate.

2. The technical members of the task force on displacement are from the International Labour Organization, the International Federation of Red Cross and Red Crescent Societies, the International Organization for Migration, the Platform on Disaster Displacement, the United Nations Development Programme, the Office of the United Nations High Commissioner for Refugees, and civil society groups as represented by the Advisory Group on Climate Change and Human Mobility, which includes the Internal Displacement Monitoring Centre, the Norwegian Refugee Council, the Hugo Observatory, the Arab Network for Environment and Development, and Refugees International.

9th plenary meeting
15 December 2018

Decision 1/CP.26

Glasgow Climate Pact

The Conference of the Parties,

Recalling decisions 1/CP.19, 1/CP.20, 1/CP.21, 1/CP.22, 1/CP.23, 1/CP.24 and 1/CP.25,

Noting decisions 1/CMP.16 and 1/CMA.3,

Recognizing the role of multilateralism and the Convention, including its processes and principles, and the importance of international cooperation in addressing climate change and its impacts, in the context of sustainable development and efforts to eradicate poverty,

Acknowledging the devastating impacts of the coronavirus disease 2019 pandemic and the importance of ensuring a sustainable, resilient and inclusive global recovery, showing solidarity particularly with developing country Parties,

Recognizing the important advances made through the UNFCCC multilateral process since 1994, including in the context of the Convention, the Kyoto Protocol and the Paris Agreement,

Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity,

Noting the importance of ensuring the integrity of all ecosystems, including in forests, the ocean and the cryosphere, and the protection of biodiversity, recognized by some cultures as Mother Earth, and *also noting* the importance for some of the concept of 'climate justice', when taking action to address climate change,

Expressing appreciation to the Heads of State and Government who participated in the World Leaders Summit in Glasgow and for the increased targets and actions announced and the commitments made to work together and with non-Party stakeholders to accelerate sectoral action by 2030,

Recognizing the important role of indigenous peoples, local communities and civil society, including youth and children, in addressing and responding to climate change and *highlighting* the urgent need for multilevel and cooperative action,

Recognizing the interlinked global crises of climate change and biodiversity loss, and the critical role of protecting, conserving and restoring nature and ecosystems in delivering benefits for climate adaptation and mitigation, while ensuring social and environmental safeguards,

I. Science and urgency

1. *Recognizes* the importance of the best available science for effective climate action and policymaking;

2. *Welcomes* the contribution of Working Group I to the Intergovernmental Panel on Climate Change Sixth Assessment Report[1] and the recent global and regional reports on the state of the climate from the World Meteorological Organization and *invites* the

[1] Intergovernmental Panel on Climate Change. 2021. *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. V Masson-Delmotte, P Zhai, A Pirani, et al. (eds.). Cambridge: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg1/.

Intergovernmental Panel on Climate Change to present its forthcoming reports to the Subsidiary Body for Scientific and Technological Advice in 2022;

3. *Expresses alarm and utmost concern* that human activities have caused around 1.1 °C of global warming to date and that impacts are already being felt in every region;

4. *Stresses* the urgency of enhancing ambition and action in relation to mitigation adaptation and finance in this critical decade to address gaps between current efforts and pathways in pursuit of the ultimate objective of the Convention and its long-term global goal;

II. Adaptation

5. *Notes with serious concern* the findings from the contribution of Working Group I to the Intergovernmental Panel on Climate Change Sixth Assessment Report, including that climate and weather extremes and their adverse impacts on people and nature will continue to increase with every additional increment of rising temperatures;

6. *Emphasizes* the urgency of scaling up action and support, including finance, capacity-building and technology transfer, to enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change in line with the best available science, taking into account the priorities and needs of developing country Parties;

7. *Welcomes* the national adaptation plans submitted to date, which enhance the understanding and implementation of adaptation actions and priorities;

8. *Urges* Parties to further integrate adaptation into local, national and regional planning;

9. *Invites* the Intergovernmental Panel on Climate Change to present to the Conference of the Parties at its twenty-seventh session (November 2022) the findings from the contribution of Working Group II to its Sixth Assessment Report, including those relevant to assessing adaptation needs, and *calls upon* the research community to further the understanding of global, regional and local impacts of climate change, response options and adaptation needs;

III. Adaptation finance

10. *Notes with concern* that the current provision of climate finance for adaptation remains insufficient to respond to worsening climate change impacts in developing country Parties;

11. *Urges* developed country Parties to urgently and significantly scale up their provision of climate finance, technology transfer and capacity-building for adaptation so as to respond to the needs of developing country Parties as part of a global effort, including for the formulation and implementation of national adaptation plans;

12. *Recognizes* the importance of the adequacy and predictability of adaptation finance, including the value of the Adaptation Fund in delivering dedicated support for adaptation;

13. *Welcomes* the recent pledges made by many developed country Parties to increase their provision of climate finance to support adaptation in developing country Parties in response to their growing needs, including contributions made to the Adaptation Fund and the Least Developed Countries Fund, which represent significant progress compared with previous efforts;

14. *Calls upon* multilateral development banks, other financial institutions and the private sector to enhance finance mobilization in order to deliver the scale of resources needed to achieve climate plans, particularly for adaptation, and *encourages* Parties to continue to explore innovative approaches and instruments for mobilizing finance for adaptation from private sources;

IV. Mitigation

15. *Reaffirms* the long-term global goal to hold the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;

16. *Recognizes* that the impacts of climate change will be much lower at the temperature increase of 1.5 °C compared with 2 °C and *resolves* to pursue efforts to limit the temperature increase to 1.5 °C;

17. *Recognizes* that limiting global warming to 1.5 °C requires rapid, deep and sustained reductions in global greenhouse gas emissions, including reducing global carbon dioxide emissions by 45 per cent by 2030 relative to the 2010 level and to net zero around mid-century as well as deep reductions in other greenhouse gases;

18. *Also recognizes* that this requires accelerated action in this critical decade, on the basis of the best available scientific knowledge and equity, reflecting common but differentiated responsibilities and respective capabilities and in the context of sustainable development and efforts to eradicate poverty;

19. *Invites* Parties to consider further actions to reduce by 2030 non-carbon dioxide greenhouse gas emissions, including methane;

20. *Calls upon* Parties to accelerate the development, deployment and dissemination of technologies, and the adoption of policies, to transition towards low-emission energy systems, including by rapidly scaling up the deployment of clean power generation and energy efficiency measures, including accelerating efforts towards the phasedown of unabated coal power and phase-out of inefficient fossil fuel subsidies, while providing targeted support to the poorest and most vulnerable in line with national circumstances and recognizing the need for support towards a just transition;

21. *Emphasizes* the importance of protecting, conserving and restoring nature and ecosystems, including forests and other terrestrial and marine ecosystems, to achieve the long-term global goal of the Convention by acting as sinks and reservoirs of greenhouse gases and protecting biodiversity, while ensuring social and environmental safeguards;

V. Finance, technology transfer and capacity-building for mitigation and adaptation

22. *Urges* developed country Parties to provide enhanced support, including through financial resources, technology transfer and capacity-building, to assist developing country Parties with respect to both mitigation and adaptation, in continuation of their existing obligations under the Convention, and *encourages* other Parties to provide or continue to provide such support voluntarily;

23. *Notes with concern* the growing needs of developing country Parties, in particular due to the increasing impacts of climate change and increased indebtedness as a consequence of the coronavirus disease 2019 pandemic;

24. *Welcomes* the first report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement[2] and the fourth (2020) Biennial Assessment and Overview of Climate Finance Flows[3] by the Standing Committee on Finance;

25. *Emphasizes* the need to mobilize climate finance from all sources to reach the level needed to achieve the goals of the Paris Agreement, including significantly increasing support for developing country Parties, beyond USD 100 billion per year;

[2] See document FCCC/CP/2021/10/Add.2–FCCC/PA/CMA/2021/7/Add.2.

[3] See document FCCC/CP/2021/10/Add.1–FCCC/PA/CMA/2021/7/Add.1.

26. *Notes with deep regret* that the goal of developed country Parties to mobilize jointly USD 100 billion per year by 2020 in the context of meaningful mitigation actions and transparency on implementation has not yet been met and *welcomes* the increased pledges made by many developed country Parties and the *Climate Finance Delivery Plan: Meeting the US$100 Billion Goal*[4] and the collective actions contained therein;

27. *Urges* developed country Parties to fully deliver on the USD 100 billion goal urgently and through to 2025 and *emphasizes* the importance of transparency in the implementation of their pledges;

28. *Urges* the operating entities of the Financial Mechanism, multilateral development banks and other financial institutions to further scale up investments in climate action and *calls for* a continued increase in the scale and effectiveness of climate finance from all sources globally, including grants and other highly concessional forms of finance;

29. *Re-emphasizes* the need for scaled-up financial resources to take into account the needs of those countries particularly vulnerable to the adverse effects of climate change and in this regard *encourages* relevant multilateral institutions to consider how climate vulnerabilities should be reflected in the provision and mobilization of concessional financial resources and other forms of support, including special drawing rights;

30. *Emphasizes* the challenges faced by many developing country Parties in accessing finance and *encourages* further efforts to enhance access to finance, including by the operating entities of the Financial Mechanism;

31. *Notes* the specific concerns raised with regard to eligibility and ability to access concessional forms of climate finance and *re-emphasizes* the importance of the provision of scaled-up financial resources, taking into account the needs of developing country Parties that are particularly vulnerable to the adverse effects of climate change;

32. *Encourages* relevant providers of financial support to consider how vulnerability to the adverse effects of climate change could be reflected in the provision and mobilization of concessional financial resources and how they could simplify and enhance access to finance;

33. *Acknowledges* the progress made on capacity-building, particularly in relation to enhancing the coherence and coordination of capacity-building activities towards the implementation of the Convention and the Paris Agreement;

34. *Recognizes* the need to continue supporting developing country Parties in identifying and addressing both current and emerging capacity-building gaps and needs, and to catalyse climate action and solutions to respond;

35. *Welcomes* the joint annual reports of the Technology Executive Committee and the Climate Technology Centre and Network for 2020 and 2021[5] and *invites* the two bodies to strengthen their collaboration;

36. *Emphasizes* the importance of strengthening cooperative action on technology development and transfer for the implementation of mitigation and adaptation action, including accelerating, encouraging and enabling innovation, and the importance of predictable, sustainable and adequate funding from diverse sources for the Technology Mechanism;

VI. Loss and damage[6]

37. *Acknowledges* that climate change has already caused and will increasingly cause loss and damage and that, as temperatures rise, impacts from climate and weather extremes, as

[4] Available at https://ukcop26.org/wp-content/uploads/2021/10/Climate-Finance-Delivery-Plan-1.pdf.

[5] FCCC/SB/2020/4 and FCCC/SB/2021/5.

[6] It is noted that discussions related to the governance of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts did not produce an outcome; this is without prejudice to further consideration of this matter.

well as slow onset events, will pose an ever-greater social, economic and environmental threat;

38. *Also acknowledges* the important role of a broad range of stakeholders at the local, national and regional level, including indigenous peoples and local communities, in averting, minimizing and addressing loss and damage associated with the adverse effects of climate change;

39. *Reiterates* the urgency of scaling up action and support, as appropriate, including finance, technology transfer and capacity-building, for implementing approaches to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change in developing country Parties that are particularly vulnerable to these effects;

40. *Urges* developed country Parties, the operating entities of the Financial Mechanism, United Nations entities and intergovernmental organizations and other bilateral and multilateral institutions, including non-governmental organizations and private sources, to provide enhanced and additional support for activities addressing loss and damage associated with the adverse effects of climate change;

41. *Recognizes* the importance of demand-driven technical assistance in building capacity to implement approaches to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change;

42. *Welcomes* the further operationalization of the Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including the agreement on its functions and process for further developing its institutional arrangements;

43. *Endorses* paragraphs 67–70 and 73–74 of decision 1/CMA.3;[7]

44. *Acknowledges* the importance of coherent action to respond to the scale of needs caused by the adverse impacts of climate change;

45. *Resolves* to strengthen partnerships between developing and developed countries, funds, technical agencies, civil society and communities to enhance understanding of how approaches to averting, minimizing and addressing loss and damage can be improved;

VII. Implementation

46. *Recalls* that the round tables among Parties and non-Party stakeholders on pre-2020 implementation and ambition held in 2018, 2019 and 2020 helped to highlight and enhance understanding of the efforts of and challenges faced by Parties in relation to action and support in the pre-2020 period, as well as of the work of the constituted bodies in that period;

47. *Strongly urges* all Parties that have not yet done so to meet any outstanding pledges under the Convention as soon as possible;

48. *Welcomes* the action taken to unlock the potential for sectoral action to contribute to fulfilling and implementing national targets, particularly in emission-intensive sectors;

49. *Recognizes* the need to take into consideration the concerns of Parties with economies most affected by the impacts of response measures, particularly developing country Parties, in line with Article 4, paragraphs 8 and 10, of the Convention;

50. *Also recognizes* the importance of protecting, conserving and restoring ecosystems to deliver crucial services, including acting as sinks and reservoirs of greenhouse gases, reducing vulnerability to climate change impacts and supporting sustainable livelihoods, including for indigenous peoples and local communities;

51. *Encourages* Parties to take an integrated approach to addressing the issues referred to in paragraph 50 above in national and local policy and planning decisions;

[7] It is noted that discussions related to the governance of the Warsaw International Mechanism on Loss and Damage associated with Climate Change Impacts did not produce an outcome; this is without prejudice to further consideration of this matter.

52. *Recognizes* the need to ensure just transitions that promote sustainable development and eradication of poverty, and the creation of decent work and quality jobs, including through making financial flows consistent with a pathway towards low greenhouse gas emission and climate-resilient development, including through deployment and transfer of technology, and provision of support to developing country Parties;

VIII. Collaboration

53. *Recognizes* the importance of international collaboration on innovative climate action, including technological advancement, across all actors of society, sectors and regions, in contributing to progress towards the objective of the Convention and the goals of the Paris Agreement;

54. *Recalls* Article 3, paragraph 5, of the Convention and the importance of cooperation to address climate change and support sustainable economic growth and development;

55. *Recognizes* the important role of non-Party stakeholders, including civil society, indigenous peoples, local communities, youth, children, local and regional governments and other stakeholders, in contributing to progress towards the objective of the Convention and the goals of the Paris Agreement;

56. *Welcomes* the improvement of the Marrakech Partnership for Global Climate Action[8] for enhancing ambition, the leadership and actions of the high-level champions, and the work of the secretariat on the Non-State Actor Zone for Climate Action platform to support accountability and track progress of voluntary initiatives;

57. *Also welcomes* the high-level communiqué[9] on the regional climate weeks and *encourages* the continuation of regional climate weeks where Parties and non-Party stakeholders can strengthen their credible and durable response to climate change at the regional level;

58. *Welcomes* the informal summary reports by the Chair of the Subsidiary Body for Scientific and Technological Advice on the ocean and climate change dialogue to consider how to strengthen adaptation and mitigation action and on the dialogue on the relationship between land and climate change adaptation related matters;

59. *Invites* Parties to submit views on how to enhance climate action on land under the existing UNFCCC programmes and activities in paragraph 75 of the report on the dialogue on the relationship between land and climate change adaptation related matters referred to in paragraph 58 above and *requests* the Chair of the Subsidiary Body for Scientific and Technological Advice to prepare an informal summary report thereon and make it available to the Conference of the Parties at its twenty-seventh session;

60. *Invites* the relevant work programmes and constituted bodies under the UNFCCC to consider how to integrate and strengthen ocean-based action in their existing mandates and workplans and to report on these activities within the existing reporting processes, as appropriate;

61. *Also invites* the Chair of the Subsidiary Body for Scientific and Technological Advice to hold an annual dialogue, starting at the fifty-sixth session of the Subsidiary Body for Scientific and Technological Advice (June 2022), to strengthen ocean-based action and to prepare an informal summary report thereon and make it available to the Conference of the Parties at its subsequent session;

62. *Urges* Parties to swiftly begin implementing the Glasgow work programme on Action for Climate Empowerment, respecting, promoting and considering their respective obligations on human rights, as well as gender equality and empowerment of women;

63. *Expresses appreciation* for the outcomes of the sixteenth Conference of Youth, organized by the constituency of children and youth non-governmental organizations and

[8] Available at https://unfccc.int/sites/default/files/resource/Improved%20Marrakech%20Partnership%202021-2025.pdf.

[9] Available at https://unfccc.int/regional-climate-weeks/rcw-2021-cop26-communique.

held in Glasgow in October 2021, and the "Youth4Climate2021: Driving Ambition" event hosted by Italy in Milan, Italy, in September 2021;

64. *Urges* Parties and stakeholders to ensure meaningful youth participation and representation in multilateral, national and local decision-making processes, including under the Convention and the Paris Agreement;

65. *Invites* future Presidencies of the Conference of the Parties, with the support of the secretariat, to facilitate the organization of an annual youth-led climate forum for dialogue between Parties and youth in collaboration with the UNFCCC children and youth constituency and other youth organizations with a view to contributing to the implementation of the Glasgow work programme on Action for Climate Empowerment;

66. *Emphasizes* the important role of indigenous peoples' and local communities' culture and knowledge in effective action on climate change and *urges* Parties to actively involve indigenous peoples and local communities in designing and implementing climate action and to engage with the second three-year workplan for implementing the functions of the Local Communities and Indigenous Peoples Platform, for 2022–2024;

67. *Expresses its recognition* of the important role observer organizations play, including the nine non-governmental organization constituencies, in sharing their knowledge, and their calls to see ambitious action to meet the objectives of the Convention and in collaborating with Parties to that end;

68. *Encourages* Parties to increase the full, meaningful and equal participation of women in climate action and to ensure gender-responsive implementation and means of implementation, which are vital for raising ambition and achieving climate goals;

69. *Calls upon* Parties to strengthen their implementation of the enhanced Lima work programme on gender and its gender action plan;[10]

70. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in this decision;

71. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

12th plenary meeting
13 November 2021

[10] See decision 3/CP.25, annex.

Decision 14/CP.26

Revised terms of reference of the Consultative Group of Experts

The Conference of the Parties,

Recalling Article 4, paragraphs 1, 3 and 7, and Article 12, paragraphs 1, 4, 5 and 7, of the Convention,

Also recalling Article 13, paragraphs 1, 14 and 15, of the Paris Agreement,

Further recalling decisions 8/CP.5, 3/CP.8, 17/CP.8, 5/CP.15, 1/CP.16, 2/CP.17, 14/CP.17, 17/CP.18, 18/CP.18, 19/CP.19, 20/CP.19, 1/CP.21, 20/CP.22 and 11/CP.24,

Recalling decision 18/CMA.1, paragraphs 12(c) and 15,

Recognizing that the Consultative Group of Experts plays an important role in facilitating the provision of technical advice and support to developing country Parties and in facilitating improved reporting over time, as applicable, in relation to the preparation and submission of national communications, biennial update reports and biennial transparency reports, as relevant,

Noting the 2020 and 2021 progress reports[1] of the Consultative Group of Experts, which identified facilitating the submission of biennial update reports as a priority in its workplans for 2020 and 2021,

1. *Adopts*, pursuant to decision 11/CP.24, paragraph 5, the revised terms of reference of the Consultative Group of Experts contained in the annex;

2. *Decides* that the representative of Parties referred to in decision 11/CP.24, paragraph 3, shall participate in the work of the Consultative Group of Experts in the same capacity as the other members of the Consultative Group of Experts, noting that this does not set a precedent for the consideration of the composition of other bodies under the UNFCCC;

3. *Also decides* to include in the composition of the Consultative Group of Experts, in addition to current members from Parties not included in Annex I to the Convention, one additional member from the least developed countries and one additional member from small island developing States, noting that this does not set a precedent for the consideration of the composition of other bodies under the UNFCCC;

4. *Requests* the Subsidiary Body for Implementation, at its sixty-second session (2025), to initiate consideration of the extension of the term of the Consultative Group of Experts after 2026, the composition of the Consultative Group of Experts and its terms of reference, taking into account the needs of developing countries for capacity-building in relation to reporting under the UNFCCC and the Paris Agreement, with a view to recommending a draft decision on these matters for consideration and adoption by the Conference of the Parties at its thirtieth session (2025);

5. *Also requests* the secretariat to facilitate the work of the Consultative Group of Experts pursuant to decision 11/CP.24 and this decision;

6. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in paragraph 5 above;

7. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

[1] FCCC/SBI/2020/15, FCCC/SBI/2020/16, FCCC/TP/2020/1, FCCC/SBI/2021/12, FCCC/SBI/2021/14 and FCCC/TP/2021/2.

Annex

Revised terms of reference of the Consultative Group of Experts

1. The objective of the Consultative Group of Experts shall be to provide technical advice and support to developing country Parties for enhancing their institutional and technical capacity to prepare and submit national communications, biennial update reports, national greenhouse gas inventories and biennial transparency reports, as applicable, with a view to facilitating improvements in their reporting over time. Taking into account decisions 1/CP.21, paragraph 98, 1/CP.24, paragraphs 38 and 43(a–b), and 18/CMA.1, paragraphs 3–4, the Consultative Group of Experts shall ensure that it prioritizes its work in a manner that addresses the challenges, constraints and needs of developing country Parties.

2. In fulfilling its mandate[1] to support implementation of the existing measurement, reporting and verification arrangements under the Convention by Parties not included in Annex I to the Convention (non-Annex I Parties), the Consultative Group of Experts shall:

(a) Provide, taking into account decision 1/CP.24, paragraphs 38 and 43(a–b), technical assistance and support to non-Annex I Parties to facilitate the process of and the preparation of their national communications[2] and biennial update reports in accordance with the "Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention", contained in the annex to decision 17/CP.8, and the "UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention", contained in annex III to decision 2/CP.17;

(b) Provide recommendations, as appropriate, on elements to be considered in a future revision of the "Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention", taking into account the experience of non-Annex I Parties in preparing their national communications;

(c) Provide technical advice and support to Parties, upon request, on the provision of the information to be reported on steps taken to integrate climate change considerations into relevant social, economic and environmental policies and actions in accordance with Article 4, paragraph 1(f), of the Convention;

(d) Provide guidance and periodic advice to the secretariat to assist it in fulfilling the selection criteria for the composition of teams of technical experts, in accordance with decision 20/CP.19, annex, paragraphs 3–5, taking into account the reports provided by the secretariat in this regard on a semi-annual basis;

(e) Continue updating and organizing, as needed, with the assistance of the secretariat, the training programmes for nominated technical experts for the technical analysis of biennial update reports, on the basis of the most up-to-date training materials of the Consultative Group of Experts, with a view to improving the technical analysis, taking into account the experience of non-Annex I Parties, in particular the least developed countries and small island developing States, in preparing their biennial update reports, and increasing the representation of the least developed countries and small island developing States in teams of technical experts.

3. In fulfilling its mandate to support implementation of the enhanced transparency framework under Article 13 of the Paris Agreement, the Consultative Group of Experts shall:

(a) Facilitate the provision of technical advice and support to developing country Parties, as applicable, including for the preparation and submission of their biennial

[1] Decision 11/CP.24.

[2] In accordance with decision 1/CP.24, para. 43(a), Parties may submit their national communication and biennial transparency report as a single report in accordance with the modalities, procedures and guidelines contained in the annex to decision 18/CMA.1 for information also covered by the national communication reporting guidelines contained in, as applicable, decisions 4/CP.5 and 17/CP.8.

transparency reports, and facilitate improved reporting over time in accordance with the modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement;[3]

(b) Provide technical advice to the secretariat on the implementation of the training for technical expert review teams referred to in decision 18/CMA.1, paragraph 12(c).

4. The Consultative Group of Experts, in providing technical advice and support, should, to the extent possible:

(a) Give special consideration to the least developed countries and small island developing States, including in the context of the need to improve the ability of experts to participate in technical expert reviews;

(b) Identify and take into account, as appropriate, lessons learned and best practices, and the challenges, constraints and needs of developing country Parties in preparing, as appropriate, the reports referred to in paragraph 1 above, including in relation to financial and other support available, as well as the areas for improvement and capacity-building needs identified in the technical analyses of biennial update reports and the technical expert review of biennial transparency reports;

(c) Seek to promote sectoral, gender and geographical balance among experts from developing countries eligible to participate in technical expert reviews;

(d) Facilitate the development and long-term sustainability of the processes for preparing, as appropriate and relevant, the reports referred to in paragraph 1 above, including by providing technical advice and support on elaborating appropriate institutional arrangements and establishing and maintaining national technical teams;

(e) Provide, upon request, information on existing activities and programmes, including bilateral, regional and multilateral sources of financial and technical assistance, to facilitate and support the preparation, as appropriate, of the reports referred to in paragraph 1 above.

5. The Consultative Group of Experts should collaborate, to the extent possible, with other expert groups and constituted bodies under the Convention and the Paris Agreement as well as with relevant multilateral programmes and organizations, while avoiding duplication of work.

6. The Consultative Group of Experts shall develop, at its first meeting in 2022, a work programme for 2022–2026.

7. The Consultative Group of Experts shall forward recommendations on the matters referred to in paragraphs 2–3 above for consideration by the Subsidiary Body for Implementation, as appropriate.

12th plenary meeting
13 November 2021

[3] Decision 18/CMA.1, annex.

Decision 16/CP.26

Local Communities and Indigenous Peoples Platform

The Conference of the Parties,

Recalling decisions 1/CP.21 and 2/CP.24,

Also recalling decision 2/CP.23, in particular paragraph 8, in which it recommended that the processes under the Local Communities and Indigenous Peoples Platform, including its operationalization, take into account, inter alia, the interests and views of local communities and indigenous peoples as well as the following principles proposed by indigenous peoples organizations: full and effective participation of indigenous peoples; equal status of indigenous peoples and Parties, including in leadership roles; self-selection of representatives of indigenous peoples in accordance with their own procedures; and adequate funding from the secretariat and voluntary contributions to enable the functions of the Platform,

Acknowledging that Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity,

Noting the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity, recognized by some cultures as Mother Earth, and the importance for some of the concept of 'climate justice' when taking action to address climate change,

Recognizing the role of local communities and indigenous peoples in relation to the stewardship of and living in harmony with nature,

Also recognizing the important role of the Local Communities and Indigenous Peoples Platform in bringing together Parties and indigenous peoples and local communities to work towards achieving the objectives of the Convention and the Paris Agreement,

Recalling decision 2/CP.24, paragraph 27, in which it decided to adopt, at its session in November 2021, a decision on the outcome of the review of the Facilitative Working Group of the Local Communities and Indigenous Peoples Platform by the Subsidiary Body for Scientific and Technological Advice,

1. *Welcomes* the report on the 5th meeting of the Facilitative Working Group of the Local Communities and Indigenous Peoples Platform;[1]

2. *Invites* relevant bodies under the Convention to take into account the recommendations of the Facilitative Working Group to the Subsidiary Body for Scientific and Technological Advice on the engagement and input of indigenous peoples and local communities across the UNFCCC process;[2]

3. *Welcomes* the progress in implementing the three functions of the Local Communities and Indigenous Peoples Platform, including implementation of the initial two-year workplan;

4. *Recognizes* the role of the Facilitative Working Group in fostering full and effective participation of indigenous peoples and local communities in achieving the objective of the Paris Agreement;

5. *Decides* to continue the mandate of the Facilitative Working Group;

[1] FCCC/SBSTA/2021/1.

[2] FCCC/SBSTA/2021/1, annex V.

6. *Welcomes* the second three-year workplan of the Local Communities and Indigenous Peoples Platform for 2022–2024;[3, 4]

7. *Recommends* that the activities under the second three-year workplan facilitate exchange of experience between indigenous peoples and local communities and Parties of approaches to managing all ecosystems, which are key to achieving the objectives of the Convention and the Paris Agreement, in order to enhance national climate policy, including nationally determined contributions;

8. *Requests*, in the context of implementation of the second three-year workplan, the Facilitative Working Group to take into account additional inputs from Parties via submissions through the Local Communities and Indigenous Peoples Platform web portal, as appropriate;

9. *Recognizes* that the second three-year workplan facilitates continued collaboration among Parties and indigenous peoples and local communities on addressing and responding to climate change;

10. *Invites* Parties and stakeholders to enhance engagement of indigenous peoples and representatives of local communities in diverse and innovative ways in addressing and responding to climate change;

11. *Requests* the Facilitative Working Group to report on its outcomes, including a draft third three-year workplan of the Local Communities and Indigenous Peoples Platform, and on the activities under the Platform for consideration by the Conference of the Parties at its twenty-ninth session (November 2024) through the Subsidiary Body for Scientific and Technological Advice at its sixtieth session (June 2024);

12. *Decides* that the next review of the Facilitative Working Group will be held in 2024, including consideration of the request in decision 2/CP.24, paragraph 4, with a view to the Conference of the Parties adopting a decision on the review at its twenty-ninth session;

13. *Requests* the Facilitative Working Group to invite Parties, indigenous peoples and local communities and other stakeholders to make submissions by the 10th meeting of the Facilitative Working Group (November–December 2023) on the review referred to in paragraph 12 above;

14. *Notes with appreciation* the support provided by Canada, Finland, Germany, New Zealand, the Russian Federation and Sweden for implementing the functions of the Local Communities and Indigenous Peoples Platform, including as part of the initial two-year workplan;

15. *Requests* the secretariat to continue to support and facilitate the work of the Facilitative Working Group;

16. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in this decision;

17. *Invites* interested Parties and organizations to provide financial support for implementation of the functions of the Local Communities and Indigenous Peoples Platform;

18. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

10th plenary meeting
11 November 2021

[3] FCCC/SBSTA/2021/1, annex IV.

[4] The workplan should not be read as creating new rights or obligations under international law.

Decision 17/CP.26

Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts

The Conference of the Parties,

1. *Endorses* decision 19/CMA.3, on the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts and the reports[1] of its Executive Committee, which provides as follows:

"1. *Welcomes* the reports of the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts for 2020 and 2021,[2] including the recommendations contained therein;

"2. *Also welcomes* the continued progress of the Executive Committee in implementing its five-year rolling workplan and that of its expert groups in implementing their plans of action, including in response to the relevant outcomes of the 2019 review of the Warsaw International Mechanism, despite the extraordinary challenges due to the coronavirus disease 2019 pandemic;

"3. *Further welcomes*:

(a) The adoption by the Executive Committee of the plans of action of its expert groups on non-economic losses, slow onset events, and action and support, and the continued progress of implementation of the plans of action of the task force on displacement and the technical expert group on comprehensive risk management;

(b) The decision of the Executive Committee to update its five-year rolling workplan in 2022;

(c) The provision of input to the Standing Committee on Finance relating to the draft guidance for the operating entities of the Financial Mechanism;

(d) The progress of the Executive Committee, further to decision 19/CMA.1, in preparing its contribution for the technical assessment component of the global stocktake;

"4. *Encourages* the Executive Committee to:

(a) Include in its contribution referred to in paragraph 3(d) above, to the extent possible, information on challenges, opportunities, best practices and lessons learned in implementing the functions of the Warsaw International Mechanism as well as on activities and products relevant to the loss and damage considerations under the global stocktake, including in the context of decision 19/CMA.1, paragraphs 6(b)(ii) and 36(e);

(b) Consider including in the agendas for its regular meetings a standing item on how the latest climate science can inform policymaking;

"5. *Expresses appreciation* to:

(a) Organizations and other stakeholders that contributed to the success of the work undertaken and to the constituted bodies that collaborated with the Executive Committee and its expert groups in 2020–2021;

(b) Organizations that have submitted information pursuant to decision 2/CMA.2, paragraph 44;

[1] FCCC/SB/2020/3 and FCCC/SB/2021/4 and Add.1–2.

[2] As footnote 1 above.

"6. *Invites* organizations, bodies, networks and experts to include the following when reporting on the technical assistance provided to developing countries[3] with the aim of enhancing the information captured in the reports of the Executive Committee:

(a) The type of technical assistance provided;

(b) The developing countries to which technical assistance was provided and when;

(c) The involvement of and collaboration among stakeholders at the local, subnational, national, regional and international level, as applicable;

(d) Challenges experienced in providing technical assistance;

(e) The ways in which countries may access the technical assistance available;

"7. *Encourages*, noting the breadth of topics addressed in the strategic workstreams[4] of the Executive Committee, a broad range of organizations, bodies, networks and experts from all regions, working at the local, subnational, national, regional and international level, including those in developing countries and those that are represented in the expert groups of the Executive Committee, to engage in the Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change while avoiding duplication of their ongoing efforts;

"8. *Acknowledges* that the entities referred to in paragraph 7 above, particularly those that are based in developing countries, may need support, including financial support, in providing technical assistance;

"9. *Decides* that the Santiago network is to have the following functions:

(a) Contributing to the effective implementation of the functions[5] of the Warsaw International Mechanism, in line with the provisions in paragraph 7 of decision 2/CP.19 and Article 8 of the Paris Agreement, by catalysing the technical assistance of organizations, bodies, networks and experts;

(b) Catalysing demand-driven technical assistance, including of relevant organizations, bodies, networks and experts, for the implementation of relevant approaches to averting, minimizing and addressing loss and damage in developing countries that are particularly vulnerable to the adverse effects of climate change by assisting in:

(i) Identifying, prioritizing and communicating technical assistance needs and priorities;

(ii) Identifying types of relevant technical assistance;

(iii) Actively connecting those seeking technical assistance with best suited organizations, bodies, networks and experts;

(iv) Accessing technical assistance available, including from such organizations, bodies, networks and experts;

(c) Facilitating the consideration of a wide range of topics relevant to averting, minimizing and addressing loss and damage approaches, including but not limited to current and future impacts, priorities, and actions related to averting, minimizing and addressing loss and damage pursuant to decisions 3/CP.18 and 2/CP.19, the areas referred to in Article 8, paragraph 4, of the Paris Agreement and the strategic workstreams of the five-year rolling workplan of the Executive Committee;

(d) Facilitating and catalysing collaboration, coordination, coherence and synergies to accelerate action by organizations, bodies, networks and experts, across communities of practices, and for them to deliver effective and efficient technical assistance to developing countries;

[3] As per decision 2/CMA.2, para. 44.

[4] As contained in the annex to document FCCC/SB/2017/1/Add.1.

[5] Decision 2/CP.19, para. 5.

(e) Facilitating the development, provision and dissemination of, and access to, knowledge and information on averting, minimizing and addressing loss and damage, including comprehensive risk management approaches, at the regional, national and local level;

(f) Facilitating, through catalysing technical assistance of organizations, bodies, networks and experts, access to action and support (finance, technology and capacity-building), under and outside the Convention and the Paris Agreement, relevant to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including urgent and timely responses to the impacts of climate change;

"10. *Also decides* to further develop the institutional arrangements of the Santiago network by:

(a) Inviting Parties and relevant organizations to submit via the submission portal[6] by 15 March 2022 their views on the following aspects of the Santiago network:

(i) Operational modalities;

(ii) Structure;

(iii) The role of the Executive Committee and its expert groups, task force and technical expert group;

(iv) The role of loss and damage contact points and other relevant stakeholders at the subnational, national and regional level;

(v) Possible elements for the terms of reference of a potential convening or coordinating body that may provide secretarial services to facilitate work under the Santiago network;

(b) Requesting the secretariat to organize a technical workshop[7] prior to the fifty-sixth sessions of the subsidiary bodies (June 2022), under the guidance of the Chairs of those bodies, with inputs from the Executive Committee and the participation of Parties and relevant organizations, bodies, networks and experts, to elaborate on the submissions referred to in paragraph 10(a) above;

(c) Requesting the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation, at their fifty-sixth sessions, to consider the submissions referred to in paragraph 10(a) above and the discussions at the technical workshop referred to in paragraph 10(b) above with a view to providing recommendations for consideration and adoption by the governing body at its next session or the governing bodies at their next sessions;

"11. *Requests* the secretariat to continue providing support for developing countries that are particularly vulnerable to the adverse effects of climate change that may seek or wish to benefit from the technical assistance available from organizations, bodies, networks and experts under the Santiago network, without prejudice to the outcomes of the consideration by the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation of matters relating to the network;

"12. *Encourages*, recognizing the urgent need for scaling-up action and support, as appropriate, including finance, technology and capacity-building, for the implementation of relevant approaches[8] to averting, minimizing and addressing loss and damage in developing countries that are particularly vulnerable to the adverse effects of climate change, the Executive Committee, on the basis of its recommendations, to:

(a) Continue engaging and strengthening its dialogue with the Standing Committee on Finance, including by providing input to the Standing Committee on Finance when, in accordance with its mandate, it provides information, recommendations

[6] https://www4.unfccc.int/sites/submissionsstaging/Pages/Home.aspx.

[7] With the workshop to be held in a hybrid in-person and virtual format to encourage broad participation.

[8] Approaches relevant to, inter alia, slow onset events, non-economic losses and human mobility.

and draft guidance relating to the operating entities of the Financial Mechanism, as appropriate;

(b) Commence, continue and/or explore potential ways to enhance, as appropriate, collaboration with the operating entities of the Financial Mechanism to inform the work of the Executive Committee and its expert group on action and support;

"13. *Notes* that considerations related to the governance of the Warsaw International Mechanism will continue at its fourth session (November 2022);[9]

"14. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in this decision;

"15. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.";

2. *Notes* that considerations related to the governance of the Warsaw International Mechanism will continue at its twenty-seventh session (November 2022).[10]

12th plenary meeting
13 November 2021

[9] It is noted that discussions on the governance of the Warsaw International Mechanism did not produce an outcome; this is without prejudice to further consideration of this matter.

[10] As footnote 9 above.

Decision 1/CP.27

Sharm el-Sheikh Implementation Plan

The Conference of the Parties,

Recalling decisions 1/CP.19, 1/CP.20, 1/CP.21, 1/CP.22, 1/CP.23, 1/CP.24, 1/CP.25 and 1/CP.26,

Noting decision 1/CMA.4,

Being guided by science and principles,

Reaffirming the outcomes of all previous sessions of the Conferences of the Parties, Conferences of the Parties serving as the meeting of the Parties to the Kyoto Protocol and Conferences of the Parties serving as the meeting of the Parties to the Paris Agreement, including decisions 1/CP.26, 1/CMP.16 and 1/CMA.3 (the Glasgow Climate Pact),

Also reaffirming the critical role of multilateralism based on United Nations values and principles, including in the context of the implementation of the Convention and the Paris Agreement, and the importance of international cooperation for addressing global issues, including climate change, in the context of sustainable development and efforts to eradicate poverty,

Noting the importance of transitioning to sustainable lifestyles and sustainable patterns of consumption and production in efforts to address climate change,

Also noting the importance of pursuing an approach to education that promotes a shift in lifestyles while fostering patterns of development and sustainability based on care, community and cooperation,

Acknowledging that climate change is a common concern of humankind and that Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to a clean, healthy and sustainable environment, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity,

Noting the importance of ensuring the integrity of all ecosystems, including in forests, the ocean and the cryosphere, and the protection of biodiversity, recognized by some cultures as Mother Earth, and *also noting* the importance of 'climate justice', when taking action to address climate change,

Emphasizing that enhanced effective climate action should be implemented in a manner that is just and inclusive while minimizing negative social or economic impacts that may arise from climate action,

Recognizing the fundamental priority of safeguarding food security and ending hunger, and the particular vulnerabilities of food production systems to the adverse impacts of climate change,

Also recognizing the critical role of protecting, conserving and restoring water systems and water-related ecosystems in delivering climate adaptation benefits and co-benefits, while ensuring social and environmental safeguards,

1. *Underlines* the urgent need to address, in a comprehensive and synergetic manner, the interlinked global crises of climate change and biodiversity loss in the broader context of achieving the Sustainable Development Goals, as well as the vital importance of protecting, conserving, restoring and sustainably using nature and ecosystems for effective and sustainable climate action;

2. *Acknowledges* that the impacts of climate change exacerbate the global energy and food crises, and vice versa, particularly in developing countries;

3. *Stresses* that the increasingly complex and challenging global geopolitical situation and its impact on the energy, food and economic situations, as well as the additional challenges associated with the socioeconomic recovery from the coronavirus disease 2019 pandemic, should not be used as a pretext for backtracking, backsliding or de-prioritizing climate action;

II. Science and urgency

4. *Welcomes* the contributions of Working Groups II[1] and III[2] to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change;

5. *Recognizes* the importance of the best available science for effective climate action and policymaking;

6. *Takes note* of the 2022 adaptation gap[3] and emissions gap[4] reports of the United Nations Environment Programme, and recent global and regional reports of the World Meteorological Organization on the state of the climate;[5]

7. *Reiterates* that the impacts of climate change will be much lower at the temperature increase of 1.5 °C compared with 2 °C[6] and *resolves* to pursue further efforts to limit the temperature increase to 1.5 °C;

8. *Recognizes* the impacts of climate change on the cryosphere and the need for further understanding of these impacts, including of tipping points;

III. Enhancing ambition and implementation

9. *Resolves* to implement ambitious, just, equitable and inclusive transitions to low-emission and climate-resilient development in line with the principles and objectives of the Convention, the Kyoto Protocol and the Paris Agreement, taking into account this decision, the Glasgow Climate Pact and other relevant decisions of the Conference of the Parties and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

10. *Expresses appreciation* to the Heads of State and Government who participated in the Sharm el-Sheikh Climate Implementation Summit for their support in enhancing and accelerating the implementation of climate action;

IV. Energy

11. *Emphasizes* the urgent need for immediate, deep, rapid and sustained reductions in global greenhouse gas emissions by Parties across all applicable sectors, including through

[1] Intergovernmental Panel on Climate Change. 2022. *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. H Pörtner, D Roberts, M Tignor, et al. (eds.). Cambridge: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg2/.

[2] Intergovernmental Panel on Climate Change. 2022. *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. P Shukla, J Skea, R Slade, et al. (eds.). Cambridge and New York: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg3/.

[3] See United Nations Environment Programme. 2022. *Adaptation Gap Report 2022: Too Little, Too Slow – Climate adaptation failure puts world at risk*. Nairobi: United Nations Environment Programme. Available at https://www.unep.org/resources/adaptation-gap-report-2022.

[4] See United Nations Environment Programme. 2022. *Emissions Gap Report 2022: The Closing Window – Climate crisis calls for rapid transformation of societies*. Nairobi: United Nations Environment Programme. Available at https://www.unep.org/resources/emissions-gap-report-2022.

[5] See, for example, World Meteorological Organization. 2022. *State of the Global Climate 2021*. Geneva: World Meteorological Organization. Available at https://library.wmo.int/index.php?lvl=notice_display&id=22080#.Y5cGUHbMKUk.

[6] Decisions 1/CP.26, para. 16, and 1/CMA.3, para. 21.

increasing the use of low-emission and renewable energy, just energy transition partnerships and other cooperative actions;

12. *Recognizes* that the unprecedented global energy crisis underlines the urgency to rapidly transform energy systems to be more secure, reliable and resilient, including by accelerating clean and just transitions to renewable energy during this critical decade of action;

13. *Stresses* the importance of enhancing a clean energy mix, including low-emission and renewable energy, at all levels as part of diversifying energy mixes and systems, in line with national circumstances and recognizing the need for support towards just transitions;

V. Mitigation

14. *Recognizes* that limiting global warming to 1.5 °C requires rapid, deep and sustained reductions in global greenhouse gas emissions of 43 per cent by 2030 relative to the 2019 level;

15. *Also recognizes* that this requires accelerated action in this critical decade, on the basis of equity and the best available scientific knowledge, reflecting common but differentiated responsibilities and respective capabilities, in the light of different national circumstances and in the context of sustainable development and efforts to eradicate poverty;

16. *Calls upon* Parties to accelerate the development, deployment and dissemination of technologies, and the adoption of policies, to transition towards low-emission energy systems, including by rapidly scaling up the deployment of clean power generation and energy efficiency measures, including accelerating efforts towards the phasedown of unabated coal power and phase-out of inefficient fossil fuel subsidies, while providing targeted support to the poorest and most vulnerable in line with national circumstances and recognizing the need for support towards a just transition;

17. *Reiterates*[7] its invitation to Parties to consider further actions to reduce by 2030 non-carbon dioxide greenhouse gas emissions, including methane;

18. *Emphasizes* the importance of protecting, conserving and restoring nature and ecosystems to achieve the Paris Agreement temperature goal, including through forests and other terrestrial and marine ecosystems acting as sinks and reservoirs of greenhouse gases and by protecting biodiversity, while ensuring social and environmental safeguards;

19. *Recognizes* the importance of maximizing the positive and minimizing the negative economic and social impacts of the implementation of response measures and *welcomes* the adoption of decisions 20/CP.27, 7/CMP.17 and 23/CMA.4;

VI. Adaptation

20. *Notes with serious concern* the existing gap between current levels of adaptation and levels needed to respond to the adverse effects of climate change in line with findings from the contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change;

21. *Urges* Parties to adopt a transformational approach to enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change;

22. *Also urges* developed country Parties to urgently and significantly scale up their provision of climate finance, technology transfer and capacity-building for adaptation so as to respond to the needs of developing country Parties as part of a global effort, including for the formulation and implementation of national adaptation plans and adaptation communications;

23. *Highlights* the role of the Least Developed Countries Fund and the Special Climate Change Fund in supporting actions by developing countries to address climate change,

[7] Decision 1/CP.26, para. 19.

welcomes the pledges made to the two Funds and *invites* developed countries to further contribute to the two Funds;

24. *Emphasizes* the importance of protecting, conserving and restoring water and water-related ecosystems, including river basins, aquifers and lakes, and *urges* Parties to further integrate water into adaptation efforts;

VII. Loss and damage

25. *Notes with grave concern*, according to information in the contributions of Working Groups II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, the growing gravity, scope and frequency in all regions of loss and damage associated with the adverse effects of climate change, resulting in devastating economic and non-economic losses, including forced displacement and impacts on cultural heritage, human mobility and the lives and livelihoods of local communities, and *underlines* the importance of an adequate and effective response to loss and damage;

26. *Expresses deep concern* regarding the significant financial costs associated with loss and damage for developing countries, resulting in a growing debt burden and impairing the realization of the Sustainable Development Goals;

27. *Welcomes* the consideration, for the first time, of matters relating to funding arrangements responding to loss and damage associated with the adverse effects of climate change, including a focus on addressing loss and damage, under the Conference of the Parties and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement and *also welcomes* the adoption of decisions 2/CP.27 and 2/CMA.4, on matters relating to funding arrangements responding to loss and damage associated with the adverse effects of climate change;

28. *Further welcomes* the adoption of decisions 11/CP.27 and 12/CMA.4, establishing the institutional arrangements of the Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change to enable its full operationalization, including supporting its mandated role in catalysing technical assistance for the implementation of the relevant approaches at the local, national and regional level in developing countries that are particularly vulnerable to the adverse effects of climate change, and *affirms* its determination to select the host of the secretariat of the Santiago network by 2023 through a selection process conducted in an open, transparent, fair and neutral manner in accordance with the process outlined in paragraphs 19–23 of the decisions referred to above;

VIII. Early warning and systematic observation

29. *Emphasizes* the need to address existing gaps in the Global Climate Observing System, particularly in developing countries, and *recognizes* that one third of the world, including 60 per cent of Africa, does not have access to early warning and climate information services, as well as the need to enhance coordination of activities by the systematic observation community and the ability to provide useful and actionable climate information for mitigation, adaptation and early warning systems, as well as information to enable understanding of adaptation limits and of attribution of extreme events;

30. *Welcomes* and *reiterates* the United Nations Secretary-General's call made on World Meteorological Day on 23 March 2022 to protect everyone on Earth through universal coverage of early warning systems against extreme weather and climate change within the next five years and *invites* development partners, international financial institutions and the operating entities of the Financial Mechanism to provide support for implementation of the Early Warnings for All initiative;

IX. Implementation – pathways to just transition

31. *Affirms* that sustainable and just solutions to the climate crisis must be founded on meaningful and effective social dialogue and participation of all stakeholders and *notes* that the global transition to low emissions provides opportunities and challenges for sustainable economic development and poverty eradication;

32. *Emphasizes* that just and equitable transition encompasses pathways that include energy, socioeconomic, workforce and other dimensions, all of which must be based on nationally defined development priorities and include social protection so as to mitigate potential impacts associated with the transition, and *highlights* the important role of the instruments related to social solidarity and protection in mitigating the impacts of applied measures;

X. Finance

33. *Highlights* that about USD 4 trillion per year needs to be invested in clean energy technologies by 2030 to be able to reach net zero emissions by 2050,[8] and that, furthermore, a global transformation to a low-carbon economy is expected to require an investment of at least USD 4– 6 trillion per year;[9]

34. *Also highlights* that delivering such funding will require a transformation of the financial system and its structures and processes, engaging governments, central banks, commercial banks, institutional investors and other financial actors;

35. *Notes with concern* the growing gap between the needs of developing country Parties, in particular those due to the increasing impacts of climate change and their increased indebtedness, and the support provided and mobilized for their efforts to implement their nationally determined contributions, highlighting that such needs are currently estimated at USD 5.8–5.9 trillion[10] for the pre-2030 period;

36. *Expresses serious concern* that the goal of developed country Parties to mobilize jointly USD 100 billion per year by 2020 in the context of meaningful mitigation action and transparency on implementation has not yet been met and *urges* developed country Parties to meet the goal;[11]

37. *Emphasizes* that accelerated financial support for developing countries from developed countries and other sources is critical to enhancing mitigation action and addressing inequities in access to finance, including its costs, terms and conditions, and economic vulnerability to climate change for developing countries,[12] and that scaled-up public grants for mitigation and adaptation for vulnerable regions, in particular sub-Saharan Africa, would be cost-effective and have high social returns in terms of access to basic energy;

[8] See International Energy Agency. 2022. *World Energy Outlook 2022*. Paris: International Energy Agency. Available at https://www.iea.org/reports/world-energy-outlook-2022.

[9] As footnote 4 above.

[10] See Standing Committee on Finance. 2021. *First report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement*. Bonn: UNFCCC. Available at https://unfccc.int/topics/climate-finance/workstreams/needs-report.

[11] See Standing Committee on Finance. 2022. *Report on progress towards achieving the goal of mobilizing jointly USD 100 billion per year to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation*. Bonn: UNFCCC. Available at https://unfccc.int/process-and-meetings/bodies/constituted-bodies/standing-committee-on-finance-scf/progress-report.

[12] Intergovernmental Panel on Climate Change. 2022. Summary for Policymakers. *In*: H Pörtner, D Roberts, M Tignor, et al. (eds.). *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg2/.

38. *Notes* that global climate finance flows are small relative to the overall needs of developing countries, with such flows in 2019–2020 estimated to be USD 803 billion,[13] which is 31–32 per cent of the annual investment needed to keep the global temperature rise well below 2 °C or at 1.5 °C, and also below what would be expected in the light of the investment opportunities identified and the cost of failure to meet climate stabilization targets;

39. *Urges* developed country Parties to provide enhanced support, including through financial resources, technology transfer and capacity-building, to assist developing country Parties with respect to both mitigation and adaptation, in continuation of their existing obligations under the Convention, and *encourages* other Parties to provide or continue to provide such support voluntarily;

40. *Calls on* the shareholders of multilateral development banks and international financial institutions to reform multilateral development bank practices and priorities, align and scale up funding, ensure simplified access and mobilize climate finance from various sources and *encourages* multilateral development banks to define a new vision and commensurate operational model, channels and instruments that are fit for the purpose of adequately addressing the global climate emergency, including deploying a full suite of instruments, from grants to guarantees and non-debt instruments, taking into account debt burdens, and to address risk appetite, with a view to substantially increasing climate finance;

41. *Calls on* multilateral development banks to contribute to significantly increasing climate ambition using the breadth of their policy and financial instruments for greater results, including on private capital mobilization, and to ensure higher financial efficiency and maximize use of existing concessional and risk capital vehicles to drive innovation and accelerate impact;

42. *Emphasizes* the ongoing challenges faced by many developing country Parties in accessing climate finance and *encourages* further efforts, including by the operating entities of the Financial Mechanism, to simplify access to such finance;

43. *Takes note* of the report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement[14] and in this context *urges* developed country Parties to provide resources for the second replenishment of the Green Climate Fund while demonstrating progression from the previous replenishment and in line with the programming capacity of the Fund;

XI. Technology transfer and deployment

44. *Welcomes with appreciation* the first joint work programme of the Technology Executive Committee and the Climate Technology Centre and Network,[15] for 2023–2027, which will facilitate the transformational change needed to achieve the goals of the Convention and the Paris Agreement, *invites* Parties and stakeholders to cooperate and engage with the Technology Executive Committee and the Climate Technology Centre and Network to support the implementation of the joint work programme activities, including on technology needs assessments, action plans and road maps, *acknowledges* the findings in the final report on the first periodic assessment of the effectiveness and adequacy of the support provided to the Technology Mechanism in supporting the implementation of the Paris Agreement[16] and *decides* that the main challenges identified therein should be considered under the global stocktake;

45. *Highlights* the importance of cooperation on technology development and transfer and innovation in implementing the joint work programme activities;

46. *Welcomes* the forward-looking conclusions of the Subsidiary Body for Implementation to continue consideration of the Poznan strategic programme on technology

[13] See document FCCC/CP/2022/8/Add.1−FCCC/PA/CMA/2022/7/Add.1.
[14] As footnote 10 above.
[15] Available at https://unfccc.int/ttclear/tec/documents.html.
[16] FCCC/SBI/2022/13.

transfer at its sixty-first session (November 2024)[17] with the aim of supporting the implementation of relevant activities, such as those identified and prioritized in developing countries' nationally determined contributions, national adaptation plans, technology needs assessments and technology action plans, and long-term strategies;

XII. Capacity-building

47. *Notes* that capacity gaps and needs still exist in developing countries and *calls on* developed country Parties to increase support for long-term country-driven capacity-building interventions to enhance the effectiveness, success and sustainability of those interventions;

XIII. Taking stock

48. *Notes* the importance of the periodic review of the long-term global goal under the Convention and *welcomes* the adoption of decision 21/CP.27, on the second periodic review of the long-term global goal under the Convention and of overall progress towards achieving it;

XIV. Ocean

49. *Welcomes* the outcomes of and key messages[18] from the ocean and climate change dialogue[19] in 2022 and *decides* that future dialogues will, from 2023, be facilitated by two co-facilitators, selected by Parties biennially, who will be responsible for deciding the topics for and conducting the dialogue, in consultation with Parties and observers, and preparing an informal summary report to be presented in conjunction with the subsequent session of the Conference of the Parties;

50. *Encourages* Parties to consider, as appropriate, ocean-based action in their national climate goals and in the implementation of these goals, including but not limited to nationally determined contributions, long-term strategies and adaptation communications;

XV. Forest

51. *Recalls* that, in the context of the provision of adequate and predictable support to developing country Parties, Parties should collectively aim to slow, halt and reverse forest cover and carbon loss, in accordance with national circumstances, consistently with the ultimate objective of the Convention, as stated in its Article 2;[20]

52. *Encourages* Parties to consider, as appropriate, nature-based solutions or ecosystem-based approaches, taking into consideration United Nations Environment Assembly resolution 5/5,[21] for their mitigation and adaptation action while ensuring relevant social and environmental safeguards;

XVI. Agriculture

53. *Welcomes* the establishment of the four-year Sharm el-Sheikh joint work on implementation of climate action on agriculture and food security, as well as the establishment of the Sharm el-Sheikh online portal under the joint work, by decision 3/CP.27;

[17] See FCCC/SBI/2022/20, paras. 77–84.
[18] Available at https://unfccc.int/documents/615101.
[19] Mandated in decision 1/CP.26, para. 61.
[20] Decisions 1/CP.16 and 9/CP.19.
[21] UNEP/EA.5/Res.5.

XVII. Enhancing implementation: action by non-Party stakeholders

54. *Acknowledges* the engagement of non-Party stakeholders in climate action, which complements and broadens it, while recognizing the pivotal role of governments in action on climate change within the framework of the Convention, the Kyoto Protocol and the Paris Agreement;

55. *Recognizes* the important role of indigenous peoples, local communities, cities and civil society, including youth and children, in addressing and responding to climate change and *highlights* the urgent need for multilevel and cooperative action in this regard;

56. *Notes* the adoption of the action plan under the Glasgow work programme on Action for Climate Empowerment by decision 23/CP.27;

57. *Encourages* Parties to increase the full, meaningful and equal participation of women in climate action and to ensure gender-responsive implementation and means of implementation, including by fully implementing the Lima work programme on gender and its gender action plan, to raise climate ambition and achieve climate goals;

58. *Invites* Parties to provide support to developing countries for undertaking gender-related action and implementing the gender action plan;

59. *Recognizes* the role of children and youth as agents of change in addressing and responding to climate change and *encourages* Parties to include children and youth in their processes for designing and implementing climate policy and action, and, as appropriate, to consider including young representatives and negotiators into their national delegations, recognizing the importance of intergenerational equity and maintaining the stability of the climate system for future generations;

60. *Expresses its appreciation* to the Presidency of the twenty-seventh session of the Conference of the Parties for its leadership in promoting the full, meaningful and equal participation of children and youth, including by co-organizing the first youth-led climate forum (the Sharm el-Sheikh youth climate dialogue), hosting the first children and youth pavilion and appointing the first youth envoy of a Presidency of the Conference of the Parties and *encourages* future incoming Presidencies of the Conference of the Parties to consider doing the same;

61. *Expresses its appreciation* to the children and youth constituency for co-organizing the Sharm el-Sheikh youth climate dialogue with the Presidency of the twenty-seventh session of the Conference of the Parties and *notes* the outcomes of the seventeenth Conference of Youth, organized by the constituency and held in Sharm el-Sheikh in November 2022;

62. *Encourages* Parties and non-Party stakeholders to engage actively in the Marrakech Partnership for Global Climate Action;

63. *Welcomes* the leadership of the Presidency of the Conference of the Parties and the high-level champions, in particular in the context of the Sharm el-Sheikh Adaptation Agenda and the Breakthrough Agenda, and the collaboration between Parties and non-Party stakeholders, and *emphasizes* the need for continued acceleration and collaboration;

64. *Welcomes* the recommendations of the High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities, launched by the United Nations Secretary-General in March 2022, which are designed to enhance transparency and accountability related to, and progress in achieving, the climate pledges of businesses, investors, cities and regions;

65. *Invites* the secretariat to ensure greater accountability of voluntary initiatives through the Non-State Actor Zone for Climate Action platform;[22]

66. *Welcomes* the convening of five regional forums led by the President of the twenty-seventh session of the Conference of the Parties and the high-level champions, in

[22] See https://climateaction.unfccc.int/.

collaboration with the United Nations Regional Economic Commissions, on initiatives for financing climate action and the Sustainable Development Goals.

10th plenary meeting
20 November 2022

Decision 2/CP.27

Funding arrangements for responding to loss and damage associated with the adverse effects of climate change, including a focus on addressing loss and damage[1]

The Conference of the Parties and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling the Convention and the Paris Agreement,

Noting the increasing urgency of enhancing efforts to avert, minimize and address loss and damage associated with the adverse effects of climate change in the light of continued global warming and its significant impacts on vulnerable populations and the ecosystems on which they depend, as illustrated by the findings in relevant recent scientific reports, including the contributions of Working Groups I[2] and II[3] to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change,

Also noting that keeping the global average temperature rise to below 1.5 °C will be essential to limiting future loss and damage and *expressing alarm* that the contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, in line with other best available science, concluded that the gravity, scope and frequency of loss and damage will continue to increase with every additional fraction of a degree of temperature increase,

Recalling previous work under the UNFCCC as part of the consideration of the current state of finance for addressing loss and damage associated with the adverse effects of climate change,[4]

Acknowledging the many institutions and stakeholders involved in financing activities for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events,

Welcoming related initiatives announced at the twenty-seventh session of the Conference of the Parties, including, but not limited to, the Global Shield against Climate Risks and the United Nations Secretary-General's Early Warnings for All,

Acknowledging that existing funding arrangements fall short of responding to current and future impacts of climate change and are not sufficient to address the existing funding gaps related to providing action and support in responding to loss and damage associated with the adverse effects of climate change,

Recalling paragraphs 7(b) and 2 of the reports on these sessions of the Conference of the Parties and the Conference of the Parties serving as the meeting of the Parties to the Paris

[1] This item and the outcomes thereof are without prejudice to the consideration of similar issues in the future.

[2] Intergovernmental Panel on Climate Change. 2021. *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. V Masson-Delmotte, P Zhai, A Pirani, et al. (eds.). Cambridge: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg1/.

[3] Intergovernmental Panel on Climate Change. 2022. *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. H Pörtner, D Roberts, M Tignor, et al. (eds.). Cambridge: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg2/.

[4] Including but not limited to the 2016 Forum of the Standing Committee of Finance on financial instruments that address the risks of loss and damage, a technical paper on the elaboration of the sources of and modalities for accessing financial support for addressing loss and damage (FCCC/TP/2019/1), the Suva expert dialogue on loss and damage associated with climate change impacts, and the 1st Glasgow Dialogue, to discuss funding arrangements for activities to avert, minimize and address loss and damage.

Agreement respectively, in relation to the adoption of agenda sub-item 8(f), "Matters relating to finance: matters relating to funding arrangements responding to loss and damage associated with the adverse effects of climate change, including a focus on addressing loss and damage",

1. *Acknowledge* the urgent and immediate need for new, additional, predictable and adequate financial resources to assist developing countries that are particularly vulnerable to the adverse effects of climate change in responding to economic and non-economic loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events, especially in the context of ongoing and ex post (including rehabilitation, recovery and reconstruction) action;

2. *Decide* to establish new funding arrangements for assisting developing countries that are particularly vulnerable to the adverse effects of climate change, in responding to loss and damage, including with a focus on addressing loss and damage by providing and assisting in mobilizing new and additional resources, and that these new arrangements complement and include sources, funds, processes and initiatives under and outside the Convention and the Paris Agreement;

3. *Also decide*, in the context of establishing the new funding arrangements referred to in paragraph 2 above, to establish a fund for responding to loss and damage whose mandate includes a focus on addressing loss and damage;

4. *Establish* a transitional committee on the operationalization of the new funding arrangements for responding to loss and damage and the fund established in paragraph 3 above (hereinafter referred to as the Transitional Committee), in accordance with the terms of reference contained in the annex, to make recommendations based on, inter alia, elements for operationalization included in paragraph 5 below, for consideration and adoption by the Conference of the Parties at its twenty-eighth session (November–December 2023) and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its fifth session (November–December 2023) with a view to operationalizing the funding arrangements referred to in paragraph 2 above, including the fund referred to in paragraph 3 above;

5. *Agree* that the recommendations to operationalize the funding arrangements and the fund referred to in paragraphs 2–3 above respectively shall consider, inter alia:

(a) Establishing institutional arrangements, modalities, structure, governance and terms of reference for the fund referred to in paragraph 3 above;

(b) Defining the elements of the new funding arrangements referred to in paragraph 2 above;

(c) Identifying and expanding sources of funding;

(d) Ensuring coordination and complementarity with existing funding arrangements;

6. *Decide* that the Transitional Committee referred to in paragraph 4 above will be informed by the following, inter alia:

(a) The current landscape of institutions, including global, regional and national, that are funding activities related to addressing loss and damage, and ways in which coherence, coordination and synergies among them can be enhanced;

(b) The gaps within that current landscape, including the types of gap, such as relating to speed, eligibility, adequacy and access to finance, noting that these may vary depending on the challenge, such as climate-related emergencies, sea level rise, displacement, relocation, migration, insufficient climate information and data, or the need for climate-resilient reconstruction and recovery;

(c) The priority gaps for which solutions should be explored;

(d) The most effective ways in which to address the gaps, especially for the most vulnerable populations and the ecosystems on which they depend;

(e) Potential sources of funding, recognizing the need for support from a wide variety of sources, including innovative sources;

7. *Also decide* to undertake the following activities for informing the recommendations referred to in paragraphs 4–5 above:

(a) Request the secretariat to conduct two workshops in 2023, with the participation of a diversity of institutions, relevant to addressing loss and damage associated with climate change impacts;

(b) Request the secretariat to prepare a synthesis report on existing funding arrangements and innovative sources relevant to addressing loss and damage associated with the adverse effects of climate change;

(c) Invite Parties and relevant organizations to submit via the submission portal[5] by 15 February 2023 views on topics for and the structure of the 2nd Glasgow Dialogue[6] and the workshops referred to in paragraph 7(a) above;

(d) Invite United Nations agencies, intergovernmental organizations, and bilateral, multilateral and international financial institutions to submit inputs on how they might enhance access to and/or the speed, scope and scale of availability of finance for activities relevant to addressing loss and damage, including potential limitations and barriers and options for addressing them;

8. *Further decide* that the activities and considerations referred to in this decision will be undertaken taking into account the discussions at the 2nd and 3rd Glasgow Dialogues, to take place at the fifty-eighth (June 2023) and sixtieth (June 2024) sessions of the Subsidiary Body for Implementation respectively;

9. *Decide* that the 2nd and 3rd Glasgow Dialogues will build on the 1st Glasgow Dialogue, held at the fifty-sixth session of the Subsidiary Body for Implementation, and that the 2nd Dialogue shall focus on the operationalization of the new funding arrangements established in paragraph 2 above and the fund established in paragraph 3 above as well as on maximizing support from existing funding arrangements relevant for, inter alia, responding to economic and non-economic losses, slow onset events and extreme weather events, and that they will inform the work of the Transitional Committee;

10. *Request* the Chair of the Subsidiary Body for Implementation to provide a summary report on each Glasgow Dialogue no later than four weeks thereafter;

11. *Invite* the United Nations Secretary-General to convene the principals of international financial institutions and other relevant entities with a view to identifying the most effective ways to provide funding to respond to needs related to addressing loss and damage associated with the adverse effects of climate change;

12. *Also invite* international financial institutions to consider, at the 2023 Spring Meetings of the World Bank Group and the International Monetary Fund, the potential for such institutions to contribute to funding arrangements, including new and innovative approaches, responding to loss and damage associated with the adverse effects of climate change;

13. *Reiterate* decision 1/CMA.3, paragraph 64, in which developed country Parties, the operating entities of the Financial Mechanism, United Nations entities and intergovernmental organizations and other bilateral and multilateral institutions, including non-governmental organizations and private sources, are urged to provide enhanced and additional support for activities addressing loss and damage associated with the adverse effects of climate change;

14. *Request* the President of the Conference of the Parties at its twenty-seventh session, in collaboration with the incoming President of the Conference of the Parties at its twenty-eighth session, to convene ministerial consultations prior to the twenty-eighth session of the Conference of the Parties and the fifth session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement to advance consideration and understanding of a possible outcome on this matter at that session;

[5] https://www4.unfccc.int/sites/submissionsstaging/Pages/Home.aspx.

[6] See decision 1/CMA.3, para. 73.

15. *Also request* the secretariat to prepare a synthesis report on the outcomes of the activities and deliverables referred to in paragraphs 7(b), 11, 12 and 14 above to inform the recommendations to be developed by the Transitional Committee;

16. *Decide* that the secretariat shall support and facilitate the work of the Transitional Committee;

17. *Take note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in paragraphs 2–16 above;

18. *Request* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

Annex

Terms of reference for the Transitional Committee on the operationalization of the new funding arrangements for responding to loss and damage and the associated fund

I. Mandate

1. The Transitional Committee will make recommendations for consideration by the Conference of the Parties (COP) at its twenty-eighth session (November–December 2023) and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA) at its fifth session (November–December 2023) in accordance with paragraphs 4–5 of this decision.

2. The Transitional Committee will serve as a coordination mechanism that guides and oversees, as appropriate, the activities referred to in paragraph 7 of this decision.

3. The work of the Transitional Committee will be concluded with the adoption no later than at COP 28 and CMA 5 of decision(s) related to the new funding arrangements responding to loss and damage associated with the adverse effects of climate change, including a focus on addressing loss and damage, and the fund established in paragraph 3 of this decision.

II. Composition

4. The Transitional Committee shall have 24 members, to be nominated no later than 15 December 2022, comprising 10 members from developed country Parties and 14 members from developing country Parties with geographical representation as follows:

(a) Three members from Africa, including a representative of the President of COP 27;

(b) Three members from Asia and the Pacific, including a representative of the incoming President of COP 28;

(c) Three members from Latin America and the Caribbean;

(d) Two members from small island developing States;

(e) Two members from the least developed countries;

(f) One member from a developing country Party not included in the categories listed above.

III. Modalities of work

5. The Transitional Committee shall be chaired by two co-chairs, one from a developed country Party and one from a developing country Party.

6. The Transitional Committee will hold at least three meetings.

7. The UNFCCC Executive Secretary, in consultation with the President of COP 27, will convene the 1st meeting of the Transitional Committee no later than on 31 March 2023.

8. Recommendations of the Transitional Committee shall be adopted by consensus.

9. The Transitional Committee will be guided by the best available science in conducting its work.

10th plenary meeting
20 November 2022

Decision 11/CP.27

Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change under the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts

The Conference of the Parties

1. *Endorses* decision 12/CMA.4, on the Santiago network for averting, minimizing and addressing loss and damage under the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, which provides as follows:

> "1. *Recalls* that the Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change was established to catalyse the technical assistance of relevant organizations, bodies, networks and experts for the implementation of relevant approaches for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change at the local, national and regional level in developing countries that are particularly vulnerable to the adverse effects of climate change;[1]
>
> "2. *Expresses its appreciation* to the Government of Denmark for hosting the technical workshop on institutional arrangements of the Santiago network from 4 to 6 May 2022, including for making the necessary logistical and financial arrangements therefor;
>
> "3. *Decides* that the Santiago network will have the following structure:
>
> (a) A hosted secretariat that will facilitate its work, to be known as the Santiago network secretariat;
>
> (b) An Advisory Board to provide guidance and oversight to the Santiago network secretariat on the effective implementation of the functions of the network;
>
> (c) A network of member organizations, bodies, networks and experts covering a wide range of topics relevant to averting, minimizing and addressing loss and damage;
>
> "4. *Recalls* decision 1/CMA.3, paragraph 67, in which it was decided that the Santiago network will be provided with funds[2] to support technical assistance for the implementation of relevant approaches to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change in developing countries in support of the functions set out in paragraph 9 of decision 19/CMA.3;
>
> "5. *Also recalls* decision 1/CMA.3, paragraph 70, which urges developed country Parties to provide funds for the operation of the Santiago network and for the provision of technical assistance as set out in paragraph 67 of the same decision;
>
> "6. *Encourages* others to provide support for the operation of the Santiago network and technical assistance;
>
> "7. *Welcomes* the pledges that have already been made to the Santiago network;
>
> "8. *Adopts* the terms of reference of the Santiago network contained in annex I;
>
> "9. *Decides* to establish the Advisory Board of the Santiago network as part of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, which will be under the authority and guidance of and accountable

[1] Decision 2/CMA.2, para. 43.

[2] See also decision 1/CMA.3, paras. 68 and 70.

to the appropriate governing body or bodies[3] and have the roles and responsibilities outlined in annex I;

"10. *Also decides* that the members of the Advisory Board will be elected at the next session of the governing body or bodies (November–December 2023) and encourages Parties to nominate experts with a diversity of technical experience and knowledge relevant to, inter alia, averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, as well as the roles and responsibilities of the Advisory Board referred to in annex I, taking into account the need for gender balance, in accordance with decisions 36/CP.7, 23/CP.18, and 3/CP.25, and the composition of the Advisory Board outlined in annex I;

"11. *Further decides* that the members elected to the Advisory Board shall serve a term of two years and shall be eligible to serve a maximum of two consecutive terms of office;

"12. *Decides* that half of the members elected in 2023 shall serve a term of three years and half of the members shall serve a term of two years, after which time the governing body or bodies shall elect half of the members every year for a term of two years;

"13. *Also decides* that the members of the Advisory Board shall remain in office until their successors are elected;

"14. *Requests* the Advisory Board to develop draft rules of procedure[4] with a view to recommending them to the governing body or bodies through the subsidiary bodies for consideration and adoption at the sixty-first sessions of the subsidiary bodies (November 2024);

"15. *Also requests* the secretariat to continue providing support for developing countries that are particularly vulnerable to the adverse effects of climate change that may seek or wish to benefit from the technical assistance available from organizations, bodies, networks and experts under the Santiago network, until the Santiago network secretariat is operational;

"16. *Decides* that the Santiago network secretariat will be accountable to and operate under the guidance of the governing body or bodies through the Advisory Board and hosted by an organization or a consortium of organizations able to provide the necessary administrative and infrastructural support for its effective functioning;

"17. *Also decides* that the Santiago network secretariat shall, once it is operational, elaborate modalities and procedures for the Santiago network under the guidance of and by approval of the Advisory Board on the basis of the terms of reference contained in annex I, and taking into account decision 19/CMA.3, paragraph 9, endorsed in decision 17/CP.26, and decision 1/CMA.3, paragraph 67, including:

(a) Developing guidelines for the designation of organizations, bodies, networks and experts as members of the Santiago network;

(b) Developing guidelines and procedures for responding to requests for technical assistance, including considering the development of procedures for those that require an urgent response;

(c) Developing guidelines for managing funding provided for technical assistance, including to ensure that technical assistance funded directly by the Santiago network is made available to communities particularly vulnerable to the adverse effects of climate change, including through levels of minimum percentage of technical assistance funded directly by the Santiago network directed to communities particularly vulnerable to the adverse effects of climate change;

[3] Nothing in this document prejudices Parties' views or prejudges outcomes on matters related to the governance of the Warsaw International Mechanism.

[4] The Board will specify in its procedures how to adopt decisions in the event that all efforts at reaching consensus have been exhausted.

"18. *Further decides* that the selection process for the host of the Santiago network secretariat shall be launched upon the conclusion of the twenty-seventh session of the Conference of the Parties and the fourth session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement in order to select the host by 2023 and be conducted in an open, transparent, fair and neutral manner in accordance with the process outlined in paragraphs 19–23 below, informed by United Nations practices and standards;

"19. *Requests* the secretariat, under the guidance of the Chairs of the subsidiary bodies, to:

(a) Prepare and issue a call for proposals to host the Santiago network secretariat by 31 December 2022, making it widely and publicly available, including preparing a proposal template, and invite interested organizations, including consortiums of organizations, to submit their proposals in response to the call by 31 March 2023;

(b) Provide responses to enquiries from interested organizations, as appropriate;

(c) Compile the executive summaries contained in the submitted proposals and make them available on the UNFCCC website by 7 April 2023;

(d) Convene an evaluation panel by 7 April 2023 and support the panel in the preparation of an evaluation report, as referred to in paragraph 22 below;

(e) Ensure that it does not have a potential conflict of interest in the selection process, including by applying appropriate safeguards and procedures;

"20. *Invites* the Executive Committee to designate four of its members, the Climate Technology Centre and Network Advisory Board and the Paris Committee on Capacity-building to designate two members each to serve as members on the evaluation panel referred to in paragraph 19(d) above, to consider the proposals, ensuring that there is a balanced representation of developed and developing country Parties;

"21. *Also invites* the panel to consult, as appropriate, with other constituted bodies with relevant expertise, including in particular the Adaptation Committee and the Facilitative Working Group of the Local Communities and Indigenous Peoples Platform;

"22. *Requests* the evaluation panel to prepare an evaluation report with a shortlist of up to three proposals that meet the criteria referred to in annex II, including information on how the evaluation criteria have been applied to these proposals, and make the evaluation report available for consideration by the subsidiary bodies at their fifty-eighth sessions (June 2023);

"23. *Also requests* the subsidiary bodies to recommend at their fifty-eighth sessions a draft decision with one proposal to host the Santiago network secretariat that best meets the criteria set out in annex II for consideration and adoption by the governing body or bodies at their session(s) to be held in November–December 2023;

"24. *Further requests* the secretariat, under the guidance of the Chairs of the subsidiary bodies, to develop a draft host agreement (memorandum of understanding) with the proposer recommended by the subsidiary bodies at their fifty-eighth sessions with a view to recommending it for consideration and approval by the governing body or bodies at their session(s) to be held in November–December 2023;

"25. *Invites* Parties to inform the Santiago network secretariat of their liaison to the Santiago network secretariat, as appropriate for their national circumstances, to support alignment of technical assistance through the Santiago network with national priorities;

"26. *Affirms* that technical assistance provided through the Santiago network in a demand-driven manner will be developed through an inclusive and country-driven

process, taking into account the needs of vulnerable people, indigenous peoples and local communities;

"27. *Also affirms* that, when technical assistance is provided by the Santiago network, it should take into consideration the cross-cutting issues referred to in the eleventh preambular paragraph of the Paris Agreement;

"28. *Notes* that considerations related to the governance of the Warsaw International Mechanism will continue at its fifth session (November–December 2023);[5]

"29. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in this decision;

"30. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources."

2. *Notes* that considerations related to the governance of the Warsaw International Mechanism will continue at its twenty-eighth session (November–December 2023).[6]

[5] It is noted that discussions on the governance of the Warsaw International Mechanism did not produce an outcome; this is without prejudice to further consideration of this matter.

[6] As footnote 6 above.

Annex I*

Terms of reference of the Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change

I. Objective

1. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA), at its second session, established, as part of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, the Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change to catalyse the technical assistance of relevant organizations, bodies, networks and experts for the implementation of relevant approaches at the local, national and regional level in developing countries that are particularly vulnerable to the adverse effects of climate change.[1]

II. Functions

2. CMA 3 decided that the Santiago network is to have the following functions:[2]

(a) Contributing to the effective implementation of the functions[3] of the Warsaw International Mechanism, in line with the provisions in paragraph 7 of decision 2/CP.19 and Article 8 of the Paris Agreement, by catalysing the technical assistance of organizations, bodies, networks and experts;

(b) Catalysing demand-driven technical assistance, including of relevant organizations, bodies, networks and experts, for the implementation of relevant approaches to averting, minimizing and addressing loss and damage in developing countries that are particularly vulnerable to the adverse effects of climate change by assisting in:

(i) Identifying, prioritizing and communicating technical assistance needs and priorities;

(ii) Identifying types of relevant technical assistance;

(iii) Actively connecting those seeking technical assistance with best suited organizations, bodies, networks and experts;

(iv) Accessing technical assistance available, including from such organizations, bodies, networks and experts;

(c) Facilitating the consideration of a wide range of topics relevant to averting, minimizing and addressing loss and damage approaches, including but not limited to current and future impacts, priorities and actions related to averting, minimizing and addressing loss and damage pursuant to decisions 3/CP.18 and 2/CP.19, the areas referred to in Article 8, paragraph 4, of the Paris Agreement and the strategic workstreams of the second five-year rolling workplan of the Executive Committee of the Warsaw International Mechanism;[4]

(d) Facilitating and catalysing collaboration, coordination, coherence and synergies to accelerate action by organizations, bodies, networks and experts, across communities of practices, and for them to deliver effective and efficient technical assistance to developing countries;

* Annex I to decision 12/CMA.4, endorsed by the Conference of the Parties in this decision.

[1] Decision 2/CMA.2, para. 43.

[2] Decision 19/CMA.3, para. 9.

[3] Decision 2/CP.19, para. 5.

[4] See FCCC/SB/2022/2/Add.2, annex I.

(e) Facilitating the development, provision and dissemination of, and access to, knowledge and information on averting, minimizing and addressing loss and damage, including comprehensive risk management approaches, at the regional, national and local level;

(f) Facilitating, through catalysing technical assistance of organizations, bodies, networks and experts, access to action and support (finance, technology and capacity-building), under and outside the Convention and the Paris Agreement, relevant to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including urgent and timely responses to the impacts of climate change.

III. Structure

3. The Santiago network will have the following structure:

(a) A hosted secretariat that will facilitate its work, to be known as the Santiago network secretariat;

(b) An Advisory Board to provide guidance and oversight to the Santiago network secretariat on the effective implementation of the functions of the network;

(c) A network of member organizations, bodies, networks and experts covering a wide range of topics relevant to averting, minimizing and addressing loss and damage.

IV. Roles and responsibilities

A. Santiago network secretariat

4. The Santiago network secretariat shall be accountable to and operate under the guidance of the Advisory Board.

5. The Santiago network secretariat shall facilitate the implementation of the functions of the Santiago network.[5]

6. The Santiago network secretariat shall manage day-to-day operations of the Santiago network, including:

(a) Building and managing the network of member organizations, bodies, networks and experts, covering a wide range of topics relevant to averting, minimizing and addressing loss and damage approaches;[6]

(b) Ensuring the coordination and collaboration of the work of the Santiago network with relevant UNFCCC constituted bodies, in particular the Executive Committee, as well as exploring synergies with other initiatives and networks;

(c) Receiving, assessing and managing the process of responding to requests from developing countries that are particularly vulnerable to the adverse effects of climate change for technical assistance to avert, minimize and address loss and damage, in coordination with network members;

(d) Developing and executing the work programme approved by the Advisory Board, building on synergies with the five-year rolling workplan of the Executive Committee;

(e) Promoting and disseminating information on the Santiago network in a manner that is comprehensible and accessible to communities particularly vulnerable to the adverse effects of climate change;

[5] As per decision 19/CMA.3, para. 9, endorsed in decision 17/CP.26.

[6] FCCC/SB/2022/2/Add.2, annex I.

(f) Managing and directing the disbursement of funds provided for the Santiago network consistently with the fiduciary standards, legal and ethical integrity policies, and financial rules and regulations of the host of the secretariat;

(g) Administering the funds provided for technical assistance under the Santiago network in a cost-effective and transparent manner;

(h) Maintaining a monitoring and evaluation system to assess the timeliness, appropriateness and outcomes of assistance provided;

(i) Supporting and facilitating the work of the Advisory Board.

B. Advisory Board

7. The Advisory Board will:

(a) Approve policies, procedures and guidelines developed by the Santiago network secretariat;

(b) Provide guidance on the effective implementation of the functions of the Santiago network;

(c) Provide guidance on the preparation of the annual report of the Santiago network;

(d) Approve modalities for the designation of organizations, bodies, networks and experts as members of the Santiago network;

(e) Approve the work programme of the Santiago network, ensuring, as much as possible, coherence and synergies with the five-year rolling workplan of the Executive Committee and the plans of action of the expert groups, task force and technical expert group of the Warsaw International Mechanism;

(f) Approve the annual budget of the Santiago network;

(g) Endorse the appointment of the director of the Santiago network secretariat;

(h) Endorse the financial statement of the Santiago network;

(i) Review the timeliness and quality of the responses of the Santiago network to requests for technical assistance;

(j) Provide guidance on and approve the criteria used to assure the relevance and quality of expertise and services delivered by organizations, bodies, networks and experts.

V. Composition of the Advisory Board

8. The Advisory Board, with the aim of achieving fair and balanced representation, shall be composed of the following:

(a) Two members from each of the five recognized United Nations regional groups;

(b) One member each from the least developed countries and small island developing States;

(c) Two members of the Executive Committee, nominated by the Executive Committee from among its members.

9. The Advisory Board will also have three other representatives, one from the women and gender constituency, one from indigenous peoples organizations, and one from the children and youth non-governmental organizations, who may actively participate in the deliberations of the Advisory Board.

VI. Matters related to meetings of the Advisory Board

10. The Advisory Board meetings will be open to observers, unless otherwise decided by the Advisory Board, and the Advisory Board will invite observers from relevant constituted bodies, civil society organizations and other organizations, bodies, networks and experts to attend its meetings in order to provide technical expertise and inputs, as appropriate, to the Advisory Board for its deliberations.

11. Decisions of the Advisory Board will be taken by consensus by the members listed in paragraph 8 above.

12. The Advisory Board shall meet at least twice a year, where possible in connection with meetings of the Executive Committee, while retaining its flexibility to adjust the number of meetings to suit its needs.

VII. Organizational structure of the secretariat

13. The Santiago network secretariat will have a lean, cost-efficient organizational structure, led by a director who will manage a small core team of professional and administrative staff, in order to meet its responsibilities and perform its functions efficiently and effectively.

14. The Santiago network secretariat is to be hosted by an organization or a consortium of several organizations capable of supporting the functions of the Santiago network secretariat.

15. Subject to the endorsement of the Advisory Board, the director of the Santiago network secretariat will be appointed by the host. The director will be accountable to the host for administrative issues relating to the administrative effectiveness and efficiency of the Santiago network secretariat and to the Advisory Board for the effective implementation of the functions of the Santiago network.

16. The director will have a fixed term of office no longer than the term of the host agreement, which may be renewed subject to endorsement by the Advisory Board, and should have broad responsibility to provide strategic leadership to the Santiago network and to manage its secretariat.

17. The director of the Santiago network secretariat shall serve as secretary to the Advisory Board.

VIII. Reporting

18. In line with guidance provided by the Advisory Board, the Santiago network secretariat will prepare an annual report on activities of the Santiago network secretariat and network and on the performance of their respective functions, including information on:

(a) Requests received and activities carried out by the Santiago network and their outcomes;

(b) Responses to requests;

(c) Ongoing work as well as lessons learned and best practices derived from that work;

(d) Support delivered in regions, finance disbursed and administrative costs;

(e) Inclusion of new members in the Santiago network and their engagement therein;

(f) Assistance to developing country Parties in identifying, prioritizing and communicating their needs for technical assistance;

(g) Efforts to reach communities that are particularly vulnerable to the adverse effects of climate change;

(h) Gender considerations, including through the use of gender-disaggregated data, consistently with decision 3/CP.25.

19. The Santiago network secretariat will prepare an annual report and submit it to the Advisory Board for its consideration and approval. The approved report will be forwarded to the secretariat to be included in a joint annual report of the Santiago network and the Executive Committee submitted to the governing body or bodies through their subsidiary bodies.

IX. Review

20. The Santiago network secretariat will commission one independent review of the performance of the Santiago network, including, inter alia, sustainability and sources of funding, adequacy of funding levels relative to technical assistance requests, timeliness, effectiveness, engagement, gender-responsiveness and delivery of technical assistance to communities particularly vulnerable to the adverse effects of climate change, in a timely manner so that the findings of this review can feed into the subsequent review of the Warsaw International Mechanism,[7] for determining the need for further independent reviews of the performance of the Santiago network.

X. Term of host agreement

21. The initial term of the agreement to host the secretariat of the Santiago network will be five years, with five-year renewal periods, if so decided by the appropriate governing body or bodies.

22. The renewal of the agreement to host the Santiago network secretariat will be subject to the host organization satisfactorily fulfilling its functions.

[7] As per decision 2/CMA.2, para. 46.

Annex II*

Criteria to be used to evaluate proposals and select the host of the secretariat of the Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change

1. The proposals submitted pursuant to paragraph 19(a) of this decision will be evaluated against the criteria below.

I. Technical capability

2. The technical capability criteria are as follows:

(a) Be a single organization or a consortium of partner organizations capable of providing a lean, efficient and agile service to the secretariat of the Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change;

(b) Have strong networks across communities of practice, including development and humanitarian actors, relevant to averting, minimizing and addressing loss and damage, climate change adaptation, and disaster risk reduction, response and recovery;

(c) Have a broad regional presence and have demonstrated experience and expertise in understanding the dynamics of various countries;

(d) Have a track record of facilitating technical assistance and building capacity in developing countries and communities that are particularly vulnerable to the adverse effects of climate change;

(e) Have demonstrated experience in managing global networks or initiatives and capability to engage with multiple stakeholders for effective operations;

(f) Have demonstrated the capacity to engage in partnerships with a wide range of organizations, bodies, networks and experts across different communities working in domains relevant to averting, minimizing and addressing loss and damage, including climate change adaptation, disaster risk management, humanitarian aid and development cooperation, as well as with finance providers and other partners.

II. Management and governance

3. The management and governance criteria are as follows:

(a) Have an effective governance and management structure to support high-quality administration, ensuring compliance with ethical standards;

(b) Have the necessary staff recruitment and management capability;

(c) Have demonstrated an ability to simultaneously administer and manage multiple and complex projects in developing countries;

(d) Be able to manage and maintain information systems to enable sharing of best practices and lessons learned;

(e) Be able to guarantee the appropriate monitoring and tracking of the actions undertaken.

* Annex II to decision 12/CMA.4, endorsed by the Conference of the Parties in this decision.

III. Financial management

4. The financial management criteria are as follows:

(a) Have financial management, auditing and reporting functions; a robust accountability system; sound financial systems of international standard; and a fiduciary record that ensures the correct and impartial administering and disbursement of funds;

(b) Have a track record in financial stability and sustainability.

IV. Vision and management plan

5. The vision and management plan criteria are as follows:

(a) Have an overall vision, structure and approach in terms of how the host will support the effective functioning of the Santiago network;

(b) Have a proposal for providing the Santiago network secretariat with in-kind and financial support;

(c) Identify the ways in which partners and networks could be engaged to facilitate and catalyse technical assistance.

10th plenary meeting
20 November 2022

United Nations

Framework Convention on Climate Change

FCCC/PA/CMA/2018/3/Add.1

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Conference of the Parties serving as the meeting of the Parties to the Paris Agreement

Report of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement on the third part of its first session, held in Katowice from 2 to 15 December 2018

Addendum

Part two: Action taken by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement

Contents

Decisions adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement

Decision		*Page*
3/CMA.1	Matters relating to the implementation of the Paris Agreement	3
4/CMA.1	Further guidance in relation to the mitigation section of decision 1/CP.21	6
5/CMA.1	Modalities and procedures for the operation and use of a public registry referred to in Article 4, paragraph 12, of the Paris Agreement	14
6/CMA.1	Common time frames for nationally determined contributions referred to in Article 4, paragraph 10, of the Paris Agreement	17
7/CMA.1	Modalities, work programme and functions under the Paris Agreement of the forum on the impact of the implementation of response measures	18
8/CMA.1	Matters relating to Article 6 of the Paris Agreement and paragraphs 36–40 of decision 1/CP.21	22
9/CMA.1	Further guidance in relation to the adaptation communication, including, inter alia, as a component of nationally determined contributions, referred to in Article 7, paragraphs 10 and 11, of the Paris Agreement	23

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10/CMA.1 Modalities and procedures for the operation and use of a public registry referred to in Article 7, paragraph 12, of the Paris Agreement 27

11/CMA.1 Matters referred to in paragraphs 41, 42 and 45 of decision 1/CP.21 30

12/CMA.1 Identification of the information to be provided by Parties in accordance with Article 9, paragraph 5, of the Paris Agreement 35

Decision 3/CMA.1

Matters relating to the implementation of the Paris Agreement

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling the Paris Agreement, adopted under the Convention,

Also recalling Article 9, paragraph 8, Article 11, paragraph 5, and Article 19 of the Paris Agreement,

Further recalling Article 2, paragraph 2, of the Paris Agreement, which states that the Agreement will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances,

Recalling decision 1/CMA.1,

Also recalling decisions 1/CP.21, 1/CP.22, 1/CP.23 and 1/CP.24,

1. *Congratulates* Parties that have ratified, accepted, approved or acceded to the Paris Agreement, and *invites* those that have not yet done so to deposit their instruments of ratification, acceptance, approval or accession, where appropriate, with the Depositary as soon as possible;

I. Paris Agreement work programme

2. *Expresses its appreciation* to the Conference of the Parties for overseeing the implementation of the Paris Agreement work programme by the subsidiary and constituted bodies;

3. *Also expresses its appreciation* to the subsidiary and constituted bodies for their work on the implementation of the Paris Agreement work programme;

4. *Decides*, having considered the draft decisions on matters relating to the Paris Agreement work programme forwarded by the Conference of the Parties at its twenty-fourth session and the Subsidiary Body for Implementation, to adopt them as follows:

Matters relating to Article 4 of the Paris Agreement and paragraphs 22–35 of decision 1/CP.21

(a) Further guidance in relation to the mitigation section of decision 1/CP.21 (decision 4/CMA.1);

(b) Modalities and procedures for the operation and use of a public registry referred to in Article 4, paragraph 12, of the Paris Agreement (decision 5/CMA.1);

(c) Common time frames for nationally determined contributions referred to in Article 4, paragraph 10, of the Paris Agreement (decision 6/CMA.1);

(d) Modalities, work programme and functions under the Paris Agreement of the forum on the impact of the implementation of response measures (decision 7/CMA.1);

Matters relating to Article 6 of the Paris Agreement and paragraphs 36–40 of decision 1/CP.

(e) Matters relating to Article 6 of the Paris Agreement and paragraphs 36–40 of decision 1/CP.21 (decision 8/CMA.1);

Matters relating to Article 7 of the Paris Agreement and paragraphs 41, 42 and 45 of decision 1/CP.21

(f) Further guidance in relation to the adaptation communication, including, inter alia, as a component of nationally determined contributions, referred to in Article 7, paragraphs 10 and 11, of the Paris Agreement (decision 9/CMA.1);

(g) Modalities and procedures for the operation and use of a public registry referred to in Article 7, paragraph 12, of the Paris Agreement (decision 10/CMA.1);

(h) Matters referred to in paragraphs 41, 42 and 45 of decision 1/CP.21 (decision 11/CMA.1);

Matters relating to Article 9 of the Paris Agreement and paragraphs 52–64 of decision 1/CP.21[1]

(i) Identification of the information to be provided by Parties in accordance with Article 9, paragraph 5, of the Paris Agreement (decision 12/CMA.1);

(j) Matters relating to the Adaptation Fund (decision 13/CMA.1);

(k) Setting a new collective quantified goal on finance in accordance with decision 1/CP.21, paragraph 53 (decision 14/CMA.1);

Matters relating to Article 10 of the Paris Agreement and paragraphs 66–70 of decision 1/CP.21

(l) Technology framework under Article 10, paragraph 4, of the Paris Agreement (decision 15/CMA.1);

(m) Scope of and modalities for the periodic assessment referred to in paragraph 69 of decision 1/CP.21 (decision 16/CMA.1);

Matters relating to Article 12 of the Paris Agreement and paragraphs 82 and 83 of decision 1/CP.21

(n) Ways of enhancing the implementation of education, training public awareness, public participation and public access to information so as to enhance actions under the Paris Agreement (decision 17/CMA.1);

Matters relating to Article 13 of the Paris Agreement and paragraphs 84–98 of decision 1/CP.21

(o) Modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement (decision 18/CMA.1);[2]

Matters relating to Article 14 of the Paris Agreement and paragraphs 99–101 of decision 1/CP.21

(p) Matters relating to Article 14 of the Paris Agreement and paragraphs 99–101 of decision 1/CP.21 (decision 19/CMA.1);

Matters relating to Article 15 of the Paris Agreement and paragraphs 102 and 103 of decision 1/CP.21

(q) Modalities and procedures for the effective operation of the committee to facilitate implementation and promote compliance referred to in Article 15, paragraph 2, of the Paris Agreement (decision 20/CMA.1);

5. *Notes* the technical follow-up work to be undertaken by the subsidiary and constituted bodies as specified in the decisions referred to in paragraph 4 above;

[1] The outcome on modalities for the accounting of financial resources provided and mobilized through public interventions in accordance with Article 9, paragraph 7, of the Paris Agreement is incorporated in section V of decision 18/CMA.1.

[2] As footnote 1 above.

II. Guidance to the operating entities of the Financial Mechanism – the Green Climate Fund and the Global Environment Facility – and on the Least Developed Countries Fund and the Special Climate Change Fund

6. *Confirms* that the Standing Committee on Finance shall serve the Paris Agreement;

7. *Also confirms* that the Least Developed Countries Fund and the Special Climate Change Fund shall serve the Paris Agreement;

8. *Requests* the Standing Committee on Finance to prepare draft guidance for the entities entrusted with the operation of the Financial Mechanism, and on the Least Developed Countries Fund and the Special Climate Change Fund, for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its second session (December 2019);

9. *Confirms* that it shall provide guidance to the entities entrusted with the operation of the Financial Mechanism of the Convention on the policies, programme priorities and eligibility criteria related to the Paris Agreement for transmission by the Conference of the Parties;

10. *Recommends* that, in accordance with decision 1/CP.21, paragraph 61, the Conference of the Parties transmit to the operating entities of the Financial Mechanism the guidance contained in the decisions referred to in paragraph 4 above;

III. Capacity-building under the Paris Agreement

11. *Recognizes* the importance of capacity-building under the Paris Agreement in enhancing the capacity and ability of developing country Parties, in particular countries with the least capacity and those that are particularly vulnerable to the adverse effects of climate change, to take effective climate change action;

12. *Decides* to consider at its second session any recommendations made by the Conference of the Parties at its twenty-fifth session (December 2019) pursuant to decision 1/CP.21, paragraph 81;

13. *Also decides* to consider and adopt at its second session a decision on the initial institutional arrangements for capacity-building;

IV. Administrative and budgetary matters

14. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in this decision;

15. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

26th plenary meeting
15 December 2018

Decision 4/CMA.1

Further guidance in relation to the mitigation section of decision 1/CP.21

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling relevant Articles of the Paris Agreement, including Articles 3 and 4,

Also recalling decision 1/CP.21, paragraphs 26, 28 and 31,

Further recalling that, in accordance with Article 4, paragraph 5, support shall be provided to developing country Parties for the implementation of Article 4, in accordance with Articles 9, 10 and 11, of the Paris Agreement, recognizing that enhanced support for developing country Parties will allow for higher ambition in their actions,

Recognizing that Parties have different starting points, capacities and national circumstances and *highlighting* the importance of capacity-building support for developing country Parties for the preparation and communication of their nationally determined contributions,

1. *Reaffirms* and *underscores* that, in accordance with Article 4, paragraph 5, of the Paris Agreement, support shall be provided to developing country Parties for the implementation of Article 4 of the Paris Agreement, including to continue to enhance the capacity of developing country Parties in preparing, communicating and accounting for their nationally determined contributions;

2. *Encourages* the relevant operating entities of the Financial Mechanism and constituted bodies under the Convention serving the Paris Agreement to continue to provide, within their mandates, support for capacity-building as referred to in paragraph 1 above;

3. *Invites* other organizations in a position to do so to provide support for capacity-building as referred to in paragraph 1 above;

4. *Recalls* that the least developed countries and small island developing States may prepare and communicate strategies, plans and actions for low greenhouse gas emission development reflecting their special circumstances in accordance with Article 4, paragraph 6, of the Paris Agreement;

5. *Also recalls* Article 4, paragraph 4, of the Paris Agreement, which provides that developed country Parties should continue taking the lead by undertaking economy-wide absolute emission reduction targets, and that developing country Parties should continue enhancing their mitigation efforts and are encouraged to move over time towards economy-wide emission reduction or limitation targets in the light of different national circumstances;

Further guidance for information to facilitate clarity, transparency and understanding of nationally determined contributions, referred to in decision 1/CP.21, paragraph 28

6. *Further recalls* Article 4, paragraph 8, of the Paris Agreement, which provides that, in communicating their nationally determined contributions, all Parties shall provide the information necessary for clarity, transparency and understanding in accordance with decision 1/CP.21 and any relevant decisions of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

7. *Decides* that, in communicating their second and subsequent nationally determined contributions, Parties shall provide the information necessary for clarity, transparency and understanding contained in annex I as applicable to their nationally determined contributions, and *strongly encourages* Parties to provide this information in relation to their first nationally determined contribution, including when communicating or updating it by 2020;

8. *Emphasizes* that the guidance on information necessary for clarity, transparency and understanding is without prejudice to the inclusion of components other than mitigation in a nationally determined contribution, *notes* that Parties may provide other information when submitting their nationally determined contributions, and in particular that, as provided in Article 7, paragraph 11, of the Paris Agreement, an adaptation communication referred to in Article 7, paragraph 10, of the Paris Agreement may be submitted as a component of or in conjunction with a nationally determined contribution as referred to in Article 4, paragraph 2, of the Paris Agreement, and *also notes* the further guidance in relation to the adaptation communication contained in decision 9/CMA.1;

9. *Recalls* decision 1/CP.21, paragraph 27, applicable to Parties' first nationally determined contributions, including those communicated or updated by 2020, pursuant to paragraph 24 of the same decision, in which the Conference of the Parties agreed that the information to be provided by Parties communicating their nationally determined contributions, in order to facilitate clarity, transparency and understanding, may include, as appropriate, inter alia, quantifiable information on the reference point (including, as appropriate, a base year), time frames and/or periods for implementation, scope and coverage, planning processes, assumptions and methodological approaches, including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals, and how the Party considers that its nationally determined contribution is fair and ambitious, in the light of its national circumstances, and how it contributes towards achieving the objective of the Convention as set out in its Article 2;

10. *Recognizes* that each Party with a nationally determined contribution under Article 4 of the Paris Agreement that consists of mitigation co-benefits resulting from its adaptation action and/or economic diversification plans consistent with Article 4, paragraph 7, of the Paris Agreement shall provide the information referred to in annex I as applicable to its nationally determined contribution and as it relates to such mitigation co-benefits;

Guidance for accounting for Parties' nationally determined contributions, referred to in decision 1/CP.21, paragraph 31

11. *Recalls* Article 4, paragraph 13, of the Paris Agreement, which provides that Parties shall account for their nationally determined contributions, and that, in accounting for anthropogenic emissions and removals corresponding to their nationally determined contributions, Parties shall promote environmental integrity, transparency, accuracy, completeness, comparability and consistency, and ensure the avoidance of double counting, in accordance with guidance adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

12. *Also recalls* decision 1/CP.21, paragraph 31, in which the Ad Hoc Working Group on the Paris Agreement was requested to elaborate, drawing on approaches established under the Convention and its related legal instruments, as appropriate, guidance for accounting for Parties' nationally determined contributions, as referred to in Article 4, paragraph 13, of the Paris Agreement, for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session, which ensures that:

(a) Parties account for anthropogenic emissions and removals in accordance with methodologies and common metrics assessed by the Intergovernmental Panel on Climate Change and adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

(b) Parties ensure methodological consistency, including on baselines, between the communication and implementation of nationally determined contributions;

(c) Parties strive to include all categories of anthropogenic emissions or removals in their nationally determined contributions and, once a source, sink or activity is included, continue to include it;

(d) Parties shall provide an explanation of why any categories of anthropogenic emissions or removals are excluded;

13. *Decides* that, in accounting for anthropogenic emissions and removals corresponding to their nationally determined contributions under Article 4, paragraph 13, of the Paris Agreement, Parties shall account for their nationally determined contributions in accordance with the guidance contained in annex II;

14. *Recalls* decision 1/CP.21, paragraph 32, which provides that Parties shall apply the guidance for accounting for nationally determined contributions to their second and subsequent nationally determined contributions, and that Parties may elect to apply such guidance to their first nationally determined contribution;

15. *Decides* that, in accounting for anthropogenic emissions and removals corresponding to their nationally determined contributions, Parties shall ensure the avoidance of double counting;

16. *Recognizes* that each Party with a nationally determined contribution under Article 4 of the Paris Agreement that consists of mitigation co-benefits resulting from its adaptation action and/or economic diversification plans consistent with Article 4, paragraph 7, of the Paris Agreement shall follow the guidance contained in annex II as it relates to such mitigation co-benefits;

17. *Decides* that Parties shall account for their nationally determined contributions in their biennial transparency reports, including through a structured summary, consistently with the guidance provided pursuant to Article 13, paragraph 7(b), of the Paris Agreement and any relevant guidance adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

18. *Also decides* to initiate the review of and, if necessary, update the information to facilitate clarity, transparency and understanding of nationally determined contributions and the guidance for accounting for Parties' nationally determined contributions at its tenth session (2027) with a view to considering and adopting a decision on the matter at its eleventh session (2028);

Further guidance on features of nationally determined contributions, referred to in decision 1/CP.21, paragraph 26

19. *Notes* that features of nationally determined contributions are outlined in the relevant provisions of the Paris Agreement;

20. *Decides* to continue consideration of further guidance on features of nationally determined contributions at its seventh session (2024).

Annex I

Information to facilitate clarity, transparency and understanding of nationally determined contributions, referred to in decision 1/CP.21, paragraph 28

1. **Quantifiable information on the reference point (including, as appropriate, a base year):**

(a) Reference year(s), base year(s), reference period(s) or other starting point(s);

(b) Quantifiable information on the reference indicators, their values in the reference year(s), base year(s), reference period(s) or other starting point(s), and, as applicable, in the target year;

(c) For strategies, plans and actions referred to in Article 4, paragraph 6, of the Paris Agreement, or polices and measures as components of nationally determined contributions where paragraph 1(b) above is not applicable, Parties to provide other relevant information;

(d) Target relative to the reference indicator, expressed numerically, for example in percentage or amount of reduction;

(e) Information on sources of data used in quantifying the reference point(s);

(f) Information on the circumstances under which the Party may update the values of the reference indicators.

2. **Time frames and/or periods for implementation:**

(a) Time frame and/or period for implementation, including start and end date, consistent with any further relevant decision adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA);

(b) Whether it is a single-year or multi-year target, as applicable.

3. **Scope and coverage:**

(a) General description of the target;

(b) Sectors, gases, categories and pools covered by the nationally determined contribution, including, as applicable, consistent with Intergovernmental Panel on Climate Change (IPCC) guidelines;

(c) How the Party has taken into consideration paragraph 31(c) and (d) of decision 1/CP.21;

(d) Mitigation co-benefits resulting from Parties' adaptation actions and/or economic diversification plans, including description of specific projects, measures and initiatives of Parties' adaptation actions and/or economic diversification plans.

4. **Planning processes:**

(a) Information on the planning processes that the Party undertook to prepare its nationally determined contribution and, if available, on the Party's implementation plans, including, as appropriate:

(i) Domestic institutional arrangements, public participation and engagement with local communities and indigenous peoples, in a gender-responsive manner;

(ii) Contextual matters, including, inter alia, as appropriate:

a. National circumstances, such as geography, climate, economy, sustainable development and poverty eradication;

b. Best practices and experience related to the preparation of the nationally determined contribution;

c. Other contextual aspirations and priorities acknowledged when joining the Paris Agreement;

(b) Specific information applicable to Parties, including regional economic integration organizations and their member States, that have reached an agreement to act jointly under Article 4, paragraph 2, of the Paris Agreement, including the Parties that agreed to act jointly and the terms of the agreement, in accordance with Article 4, paragraphs
16–18, of the Paris Agreement;

(c) How the Party's preparation of its nationally determined contribution has been informed by the outcomes of the global stocktake, in accordance with Article 4, paragraph 9, of the Paris Agreement;

(d) Each Party with a nationally determined contribution under Article 4 of the Paris Agreement that consists of adaptation action and/or economic diversification plans resulting in mitigation co-benefits consistent with Article 4, paragraph 7, of the Paris Agreement to submit information on:

(i) How the economic and social consequences of response measures have been considered in developing the nationally determined contribution;

(ii) Specific projects, measures and activities to be implemented to contribute to mitigation co-benefits, including information on adaptation plans that also yield mitigation co-benefits, which may cover, but are not limited to, key sectors, such as energy, resources, water resources, coastal resources, human settlements and urban planning, agriculture and forestry; and economic diversification actions, which may cover, but are not limited to, sectors such as manufacturing and industry, energy and mining, transport and communication, construction, tourism, real estate, agriculture and fisheries.

5. **Assumptions and methodological approaches, including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals:**

(a) Assumptions and methodological approaches used for accounting for anthropogenic greenhouse gas emissions and removals corresponding to the Party's nationally determined contribution, consistent with decision 1/CP.21, paragraph 31, and accounting guidance adopted by the CMA;

(b) Assumptions and methodological approaches used for accounting for the implementation of policies and measures or strategies in the nationally determined contribution;

(c) If applicable, information on how the Party will take into account existing methods and guidance under the Convention to account for anthropogenic emissions and removals, in accordance with Article 4, paragraph 14, of the Paris Agreement, as appropriate;

(d) IPCC methodologies and metrics used for estimating anthropogenic greenhouse gas emissions and removals;

(e) Sector-, category- or activity-specific assumptions, methodologies and approaches consistent with IPCC guidance, as appropriate, including, as applicable:

(i) Approach to addressing emissions and subsequent removals from natural disturbances on managed lands;

(ii) Approach used to account for emissions and removals from harvested wood products;

(iii) Approach used to address the effects of age-class structure in forests;

(f) Other assumptions and methodological approaches used for understanding the nationally determined contribution and, if applicable, estimating corresponding emissions and removals, including:

(i) How the reference indicators, baseline(s) and/or reference level(s), including, where applicable, sector-, category- or activity-specific reference levels, are constructed, including, for example, key parameters, assumptions, definitions, methodologies, data sources and models used;

(ii) For Parties with nationally determined contributions that contain non-greenhouse-gas components, information on assumptions and methodological approaches used in relation to those components, as applicable;

(iii) For climate forcers included in nationally determined contributions not covered by IPCC guidelines, information on how the climate forcers are estimated;

(iv) Further technical information, as necessary;

(g) The intention to use voluntary cooperation under Article 6 of the Paris Agreement, if applicable.

6. **How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances:**

(a) How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances;

(b) Fairness considerations, including reflecting on equity;

(c) How the Party has addressed Article 4, paragraph 3, of the Paris Agreement;

(d) How the Party has addressed Article 4, paragraph 4, of the Paris Agreement;

(e) How the Party has addressed Article 4, paragraph 6, of the Paris Agreement.

7. **How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article 2:**

(a) How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article 2;

(b) How the nationally determined contribution contributes towards Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement.

Annex II

Accounting for Parties' nationally determined contributions, referred to in decision 1/CP.21, paragraph 31

1. **Accounting for anthropogenic emissions and removals in accordance with methodologies and common metrics assessed by the Intergovernmental Panel on Climate Change (IPCC) and adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement:**

(a) Parties account for anthropogenic emissions and removals in accordance with methodologies and common metrics assessed by the IPCC and in accordance with decision 18/CMA.1;

(b) Parties whose nationally determined contribution cannot be accounted for using methodologies covered by IPCC guidelines provide information on their own methodology used, including for nationally determined contributions pursuant to Article 4, paragraph 6, of the Paris Agreement, if applicable;

(c) Parties that draw on existing methods and guidance established under the Convention and its related legal instruments, as appropriate, provide information on how they have done so;

(d) Parties provide information on methodologies used to track progress arising from the implementation of policies and measures, as appropriate;

(e) Parties that decide to address emissions and subsequent removals from natural disturbances on managed lands provide detailed information on the approach used and how it is consistent with relevant IPCC guidance, as appropriate, or indicate the relevant section of the national greenhouse gas inventory report containing that information;

(f) Parties that account for emissions and removals from harvested wood products provide detailed information on which IPCC approach has been used to estimate emissions and removals;

(g) Parties that address the effects of age-class structure in forests provide detailed information on the approach used and how this is consistent with relevant IPCC guidance, as appropriate.

2. **Ensuring methodological consistency, including on baselines, between the communication and implementation of nationally determined contributions:**

(a) Parties maintain consistency in scope and coverage, definitions, data sources, metrics, assumptions and methodological approaches;

(b) Any greenhouse gas data and estimation methodologies used for accounting should be consistent with the Party's greenhouse gas inventories, pursuant to Article 13, paragraph 7(a), of the Paris Agreement, if applicable;

(c) Parties strive to avoid overestimating or underestimating projected emissions and removals used for accounting;

(d) For Parties that apply technical changes to update reference points, reference levels or projections, the changes should reflect either of the following:

(i) Changes in the Party's inventory;

(ii) Improvements in accuracy that maintain methodological consistency;

(e) Parties transparently report any methodological changes and technical updates made during the implementation of their nationally determined contribution.

3. **Striving to include all categories of anthropogenic emissions or removals in the nationally determined contribution and, once a source, sink or activity is included, continuing to include it:**

(a) Parties account for all categories of anthropogenic emissions and removals corresponding to their nationally determined contribution;

(b) Parties strive to include all categories of anthropogenic emissions and removals in their nationally determined contribution, and, once a source, sink or activity is included, continue to include it.

4. **Providing an explanation of why any categories of anthropogenic emissions or removals are excluded.**

26th plenary meeting
15 December 2018

Decision 5/CMA.1

Modalities and procedures for the operation and use of a public registry referred to in Article 4, paragraph 12, of the Paris Agreement

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling Article 4, paragraph 12, of the Paris Agreement and decision 1/CP.21, paragraph 29,

Noting with appreciation the efforts made by the secretariat to develop and maintain an interim public registry pursuant to decision 1/CP.21, paragraph 30,

1. *Adopts* the modalities and procedures for the operation and use of the public registry referred to in Article 4, paragraph 12, of the Paris Agreement as contained in the annex;

2. *Decides* that the interim public registry prepared by the secretariat pursuant to decision 1/CP.21, paragraph 30, shall serve as the public registry referred to in Article 4, paragraph 12, of the Paris Agreement following any revisions required to bring it into accordance with the modalities and procedures referred to in paragraph 1 above, subject to confirmation by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its second session (December 2019);

3. *Also decides* that the public registry referred to in paragraph 1 above shall be made available by the secretariat, together with the public registry referred to in Article 7, paragraph 12, of the Paris Agreement, through a registry portal with two parts, comprising nationally determined contributions and adaptation communications, respectively;

4. *Requests* the secretariat:

(a) To develop a prototype of the public registry referred to in Article 4, paragraph 12, of the Paris Agreement by June 2019, and present it to Parties at an event to be held in conjunction with the fiftieth sessions of the subsidiary bodies (June 2019);

(b) To operate the public registry referred to in Article 4, paragraph 12, of the Paris Agreement, and to provide assistance on its use to Parties, other stakeholders and the public;

5. *Decides* to consider and conclude at its second session whether the prototype referred to in paragraph 4(a) above conforms to the modalities and procedures referred to in paragraph 1 above;

6. *Also decides* that the interim public registry prepared by the secretariat pursuant to decision 1/CP.21, paragraph 30, shall continue to be used on an interim basis for the purpose of implementing Article 4, paragraph 12, of the Paris Agreement until its second session;

7. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat pursuant to the provisions contained in paragraphs 2–6 above;

8. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

Annex

Modalities and procedures for the operation and use of a public registry referred to in Article 4, paragraph 12, of the Paris Agreement

I. Modalities for the operation of the public registry

1. The public registry referred to in Article 4, paragraph 12, of the Paris Agreement:

(a) Presents the recorded nationally determined contributions (NDCs) in tabular format, with one row for each NDC and columns displaying, as appropriate, name of the Party, document title, document file type, version number, status, language and date of submission;

(b) Preserves the integrity of the NDCs in accordance with their nationally determined nature;

(c) Has the capability of sorting and allowing the viewing of NDCs;

(d) Avoids unauthorized alterations and deletions of its content by using Internet security measures;

(e) Ensures user-friendly navigation within the registry and to other relevant registries and web resources operated and maintained by the secretariat, including the public registry referred to in Article 7, paragraph 12, of the Paris Agreement;

(f) Utilizes relevant web tools to provide updates and notify users of new and modified registry content;

(g) Constitutes an intuitive, easy-to-use web-based platform;

(h) Provides a user-friendly interface in all six official languages of the United Nations.

II. Procedures for the use of the public registry

A. Submission of nationally determined contributions

2. The national focal point of each Party submits the Party's NDC by uploading it to the public registry using its unique user account.

3. The secretariat:

(a) Provides Parties with technical assistance on uploading NDCs to the public registry, as required;

(b) Contacts the national focal point to confirm the receipt of an NDC, requests clarifications when necessary and confirms the finalization of the recording process of the submitted NDC in the public registry;

(c) Undertakes an Internet security check of all submitted NDCs before recording them in the public registry.

B. Maintaining a record of nationally determined contributions

4. The public registry constitutes an archive and, as a matter of public record, continues to maintain all previously submitted NDCs.

C. Access to nationally determined contributions

5. Parties, other stakeholders and the public can view, read and download NDCs from the public registry.

6. To the extent possible, the public registry should be easily accessible to users with slow Internet connections.

III. Roles

7. The national focal point of each Party is assigned a unique user account to manage the Party's content in the public registry.

8. The secretariat acts as the custodian of the public registry and is responsible for its maintenance. To that end, the secretariat:

(a) Operates and updates the public registry in accordance with these modalities and procedures, including taking precautionary action to avoid unauthorized access to or alteration of its content;

(b) Communicates with and provides assistance to Parties, other stakeholders and the public in using the public registry, including through a user guide, training programmes and online support, as appropriate.

26th plenary meeting
15 December 2018

Decision 6/CMA.1

Common time frames for nationally determined contributions referred to in Article 4, paragraph 10, of the Paris Agreement

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling Article 4, paragraphs 9 and 10, of the Paris Agreement,

Also recalling decision 1/CP.21, paragraphs 23–25,

1. *Welcomes* the progress made[1] in the consideration of common time frames for nationally determined contributions referred to in Article 4, paragraph 10, of the Paris Agreement, and *takes note* of the rich exchange of views and range of options considered and proposed by Parties on this matter;[2]

2. *Decides* that Parties shall apply common time frames to their nationally determined contributions to be implemented from 2031 onward;

3. *Requests* the Subsidiary Body for Implementation to continue the consideration of common time frames for nationally determined contributions at its fiftieth session (June 2019) with a view to making a recommendation thereon for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.

26th plenary meeting
15 December 2018

[1] The most recent informal document on deliberations on this issue is available at https://unfccc.int/documents/186278. The ideas expressed in that document are not exhaustive, do not reflect consensus or all views, and are without prejudice to the views of Parties.

[2] See document APA-SBSTA-SBI.2018.Informal.2.Add.1 (part 2), chapter 1.3.B, paragraph 1, options 1–3. The in-session submissions are available at https://unfccc.int/process/conferences/bonn-climate-change-conference-april-2018/sessions/sbi-48#eq-16 (first part of the forty-eighth session of the Subsidiary Body for Implementation), https://unfccc.int/event/sbi-48-2#eq-4 (second part of the forty-eighth session of the Subsidiary Body for Implementation) and https://unfccc.int/event/sbi-49#eq-19 (forty-ninth session of the Subsidiary Body for Implementation) and the pre-session submissions at https://www4.unfccc.int/sites/submissionsstaging/Pages/Home.aspx.

Decision 7/CMA.1

Modalities, work programme and functions of the forum under the Paris Agreement on the impact of the implementation of response measures

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling Article 4 of the Convention,

Also recalling Article 2 and Article 3, paragraph 14, of the Kyoto Protocol,

Reaffirming Article 4, paragraph 15, of the Paris Agreement,

Recalling decisions 1/CP.16, 2/CP.17, 8/CP.17, 1/CP.21 and 11/CP.21,

Recognizing that Parties may be affected not only by climate change but also by the impacts of the measures taken in response to it,

Acknowledging that there are both positive and negative impacts associated with measures taken in response to climate change,

Also acknowledging that response measures should be understood in the broader context of the transition towards low greenhouse gas emissions and climate-resilient development,

Reaffirming that Parties should cooperate to promote a supportive and inclusive international economic system that will lead to sustainable economic growth and development in all Parties,

1. *Decides* that in accordance with decision 1/CP.21, paragraph 33, the forum on the impact of the implementation of response measures (hereinafter referred to as the forum) under the subsidiary bodies shall serve the Paris Agreement in relation to matters under the Paris Agreement;

2. *Adopts* the modalities, work programme and functions of the forum contained in the annex;

3. *Acknowledges* that there is one single forum that covers the work of the Conference of the Parties, the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement on all matters relating to the impact of the implementation of response measures;

4. *Affirms* that the forum shall report to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement in respect of matters falling under Article 4, paragraph 15, of the Paris Agreement, where the forum requires the guidance of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

5. *Decides* to establish a Katowice Committee of Experts on the Impacts of the Implementation of Response Measures (hereinafter referred to as the Katowice Committee on Impacts) to support the work of the forum on the impact of the implementation of response measures and to operate in accordance with the terms of reference contained in the annex;

6. *Requests* the subsidiary bodies to review, at their fifty-ninth sessions (November 2023), the functions, work programme and modalities of the forum with a view to providing recommendations for consideration by the Conference of the Parties at its twenty-ninth session (November 2023), the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its nineteenth session (November 2023) and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its sixth session (November 2023);

7. *Also requests* the secretariat to organize the meetings of the Katowice Committee on Impacts, to be held for two days, in conjunction with the sessions of the subsidiary bodies starting from their fiftieth sessions (June 2019);

8. *Invites* Parties to nominate members to serve on the Katowice Committee on Impacts, noting that the Chairs of the subsidiary bodies shall be notified of these appointments by 15 April 2019;

9. *Decides* that the forum shall develop and recommend a six-year workplan in line with the forum's functions, work programme and modalities, taking into account relevant policy issues of concern to Parties, for consideration and adoption by the subsidiary bodies at their fiftieth sessions;

10. *Requests* the subsidiary bodies to conduct a midterm review of the workplan of the forum, starting from their fifty-sixth sessions (June 2022), with a view to enhancing the effectiveness of the forum;

11. *Invites* Parties to submit their views on the workplan of the forum and the Katowice Committee on Impacts via the submission portal[1] by 15 April 2019;

12. *Decides* that the forum on the impact of the implementation of response measures shall provide recommendations for consideration by the subsidiary bodies with a view to the subsidiary bodies recommending actions for consideration and adoption by the Conference of the Parties, the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

13. *Requests* the secretariat to support the implementation of the work programme of the forum on the impact of the implementation of response measures;

14. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in paragraphs 2, 5 and 7 above;

15. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

[1] https://unfccc.int/submissions_and_statements.

Annex

Modalities, work programme and functions under the Paris Agreement of the forum on the impact of the implementation of response measures

I. Functions

1. The forum on the impact of the implementation of response measures (hereinafter referred to as the forum) shall have the following functions:

(a) Provide a platform allowing Parties to share, in an interactive manner, information, experiences, case studies, best practices and views, and to facilitate assessment and analysis of the impact of the implementation of response measures, including the use and development of modelling tools and methodologies, with a view to recommending specific actions;

(b) Provide recommendations to the subsidiary bodies on the actions referred to in paragraph 1(a) above for their consideration, with a view to recommending those actions, as appropriate, to the Conference of the Parties, the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

(c) Provide concrete examples, case studies and practices in order to enhance the capacity of Parties, in particular developing country Parties, to deal with the impact of the implementation of response measures;

(d) Address the effects of the implementation of response measures under the Convention, the Kyoto Protocol and the Paris Agreement by enhancing cooperation among Parties, stakeholders, external organizations, experts and institutions, by enhancing the capacity and the understanding of Parties of the impacts of mitigation actions and by enabling the exchange of information, experience and best practices among Parties to raise their resilience to these impacts;

(e) Respond and take into consideration the relevant outcomes of different processes under the Paris Agreement;

(f) Promote action to minimize the adverse impacts and maximize the positive impacts of the implementation of response measures.

II. Work programme

2. The work programme comprises the following areas of work in order to address the concerns of all Parties, particularly developing country Parties:

(a) Economic diversification and transformation;

(b) Just transition of the workforce and the creation of decent work and quality jobs;

(c) Assessing and analysing the impacts of the implementation of response measures;

(d) Facilitating the development of tools and methodologies to assess the impacts of the implementation of response measures.

III. Modalities

3. The forum shall meet twice a year in conjunction with the sessions of the subsidiary bodies and will be convened under a joint agenda item of the subsidiary bodies and operate in accordance with the procedures applicable to contact groups.

4. The Katowice Committee of Experts on the Impacts of the Implementation of Response Measures (KCI) shall support the forum on the impact of the implementation of response measures to implement its work programme and shall operate in accordance with the following terms of reference:

(a) The KCI shall meet twice a year, for two days per meeting, in conjunction with the meetings of the subsidiary bodies;

(b) The KCI shall be composed of 14 members, with two members from each of the five United Nations regional groups, one member from the least developed countries, one member from the small island developing States and two members from relevant intergovernmental organizations;

(c) Members shall serve in their expert capacity and should have relevant qualifications and expertise in the technical and socioeconomic fields related to the areas of the work programme of the forum;

(d) Members identified in paragraph 4(b) above shall be nominated by their respective groups. The Chairs of the Subsidiary Body for Implementation and the Subsidiary Body for Scientific and Technological Advice shall be notified of these appointments;

(e) Members identified in paragraph 4(b) above shall serve a term of two years and shall be eligible to serve a maximum of two consecutive terms in office;

(f) The KCI shall elect, on a consensus basis, two members from among its members identified in paragraph 4(b) above to serve as Co-Chairs for a term of two years each, taking into account the need to ensure equitable geographical representation;

(g) If one of the Co-Chairs is temporarily unable to fulfil the obligations of the office, any other member designated by the KCI shall serve as Co-Chair;

(h) Meetings of the KCI shall be open to attendance, as observers, by all Parties and accredited observer organizations unless otherwise decided by the KCI;

(i) The KCI shall operate on the basis of consensus of its members;

(j) Members of the KCI shall prepare an annual report for the forum to consider with a view to making recommendations to the Conference of the Parties, the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.

5. The forum and the KCI may use the following modalities, as appropriate and as decided on a case-by-case basis, in order to carry out the work programme of the forum:

(a) Building awareness and enhancing information-sharing through the exchange and sharing of experience and best practices;

(b) Preparing technical papers, case studies, concrete examples and guidelines;

(c) Receiving input from experts, practitioners and relevant organizations;

(d) Organizing workshops.

26th plenary meeting
15 December 2018

Decision 8/CMA.1

Matters relating to Article 6 of the Paris Agreement and paragraphs 36–40 of decision 1/CP.21

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling Article 6, paragraphs 2, 4 and 8, of the Paris Agreement,

Also recalling decision 1/CP.21, paragraphs 36–40,

1. *Notes* the consideration by the Subsidiary Body for Scientific and Technological Advice and the Conference of the Parties of the mandates contained in decision 1/CP.21, paragraphs 36–40;[1]

2. *Also notes* that draft decision texts on these matters in the proposal by the President[2] were considered, but that Parties could not reach consensus thereon;

3. *Requests* the Subsidiary Body for Scientific and Technological Advice to continue consideration of the mandates referred to in paragraph 1 above, taking into consideration the draft decision texts referred to in paragraphs 1 and 2 above, with a view to forwarding a draft decision for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its second session (December 2019);

4. *Notes* that information provided in a structured summary referred to in decision 18/CMA.1, paragraph 77(d), is without prejudice to the outcomes on these matters.

26th plenary meeting
15 December 2018

[1] See the draft texts at https://unfccc.int/documents/186331, https://unfccc.int/documents/186333 and https://unfccc.int/documents/186334.

[2] Available at https://unfccc.int/sites/default/files/resource/Katowice%20text%2C%2014%20Dec2018_1015AM.pdf. Sections III.A, III.B and III.C do not reflect consensus on these matters and are without prejudice to the views of Parties or the consideration of the matter by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement.

Decision 9/CMA.1

Further guidance in relation to the adaptation communication, including, inter alia, as a component of nationally determined contributions, referred to in Article 7, paragraphs 10 and 11, of the Paris Agreement

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling relevant provisions of the Convention and the Paris Agreement, in particular Article 7,

Recognizing the importance of flexibility provided to Parties by Article 7, paragraphs 10 and 11, of the Paris Agreement for submitting and updating the adaptation communication,

Recalling decisions 4/CP.5, 17/CP.8 and 5/CP.17,

Recognizing the links between adaptation and sustainable development, including the Sustainable Development Goals and the Sendai Framework for Disaster Risk Reduction 2015–2030,

Emphasizing the intrinsic relationship that climate change actions, responses and impacts have with equitable access to sustainable development and eradication of poverty,

Recalling that continuous and enhanced international support shall be provided to developing country Parties for the implementation of Article 7, paragraphs 7, 9, 10 and 11, of the Paris Agreement, in accordance with the provisions of Articles 9, 10 and 11 of the Paris Agreement,

1. *Notes* that the purpose of the adaptation communication is to:

(a) Increase the visibility and profile of adaptation and its balance with mitigation;

(b) Strengthen adaptation action and support for developing countries;

(c) Provide input to the global stocktake;

(d) Enhance learning and understanding of adaptation needs and actions;

2. *Decides* that the adaptation communication:

(a) Is country-driven and flexible, including in the choice of communication or document, as provided in Article 7, paragraphs 10 and 11, of the Paris Agreement;

(b) Shall not pose any additional burden on developing country Parties, is not a basis for comparison between Parties and is not subject to review;

3. *Recalls* that, as provided in Article 7, paragraphs 10 and 11, of the Paris Agreement, each Party should, as appropriate, submit and update an adaptation communication, and that the adaptation communication shall be, as appropriate, submitted and updated periodically, as a component of or in conjunction with other communications or documents, including a national adaptation plan, a nationally determined contribution as referred to in Article 4, paragraph 2, of the Paris Agreement and/or a national communication;

4. *Decides* that Parties may, as appropriate, also submit and update their adaptation communication as a component of or in conjunction with the reports on impacts and adaptation as stipulated in Article 13, paragraph 8, of the Paris Agreement;

5. *Recalls* that the adaptation communications shall be recorded in a public registry maintained by the secretariat in accordance with the modalities and procedures contained in decision 10/CMA.1;

6. *Invites* Parties that choose to submit an adaptation communication to do so in time to inform each global stocktake;

7. *Also invites* Parties, according to their national circumstances and capacities, to provide in their adaptation communication information on the elements referred to in paragraph (a–d) of the annex and to provide, as appropriate, additional information on the elements referred to in paragraph (e–i) of the annex;

8. *Further invites* Parties to include, as appropriate, ex ante information in their adaptation communication based on the elements identified in the annex;

9. *Acknowledges* that Parties may, when submitting an adaptation communication, tailor the information provided, taking into account the specific communications or documents used;

10. *Encourages* Parties to clearly identify the part of the communication or document chosen, in accordance with Article 7, paragraph 11, that constitutes their adaptation communication, and to number their adaptation communications sequentially;

11. *Also encourages* Parties that choose to submit an adaptation communication as a component of or in conjunction with a nationally determined contribution to use the guidance included in this decision, as appropriate;

12. *Invites* Parties that opt to use a nationally determined contribution consistently with Article 4, paragraph 7, and in line with paragraph 11 above to provide information on the element referred to in paragraph (f) of the annex;

13. *Acknowledges* that Parties that choose to submit their adaptation communication as part of a national communication or a national adaptation plan may provide information taking into consideration the guidelines contained in document FCCC/CP/1999/7 and decisions 17/CP.8 and 5/CP.17;

14. *Also acknowledges* that adaptation communications and other relevant information will be synthesized in line with paragraph 23(b) of decision 19/CMA.1 and will contribute to reviewing the overall progress in achieving the global goal on adaptation;

15. *Requests* the Adaptation Committee to develop, with the engagement of the Intergovernmental Panel on Climate Change Working Group II, using relevant existing guidance as a starting point, as appropriate, by June 2022, draft supplementary guidance for voluntary use by Parties in communicating information in accordance with the elements contained in the annex, for consideration by the subsidiary bodies at their fifty-seventh sessions (November 2022) in the context of their consideration of the report of the Adaptation Committee;

16. *Decides* to take stock of, and if necessary revise, the guidance contained in this decision, taking into account the submissions referred to in paragraph 17 below and the synthesis report referred to in paragraph 18 below, at its eighth session (2025);

17. *Invites* Parties to submit via the submission portal[1] by February 2025 information on their experience with the application of the guidance contained in this decision;

18. *Requests* the secretariat to prepare a synthesis report on the submissions referred to in paragraph 17 above for consideration by the Subsidiary Body for Implementation at its sixty-second session (2025);

19. *Urges* developed country Parties and *invites* other Parties that provide resources on a voluntary basis, United Nations organizations, specialized agencies and other relevant organizations as well as bilateral and multilateral agencies to continue to mobilize support for adaptation activities in developing country Parties;

20. *Invites* the Global Environment Facility, in line with its existing mandate, to consider channelling support to developing country Parties for the preparation and submission of their adaptation communications, as a component of or in conjunction with other communications or documents, including a national adaptation plan, a nationally

[1] https://unfccc.int/submissions_and_statements.

determined contribution as referred to in Article 4, paragraph 2, of the Paris Agreement, and/or a national communication;

21. *Encourages* the Green Climate Fund, the Global Environment Facility, the Adaptation Fund, the Climate Technology Centre and Network and the Paris Committee on Capacity-building, in line with their existing mandates and governing instruments, to continue channelling support to developing country Parties for the implementation of their adaptation plans and actions in accordance with the priorities and needs outlined in their adaptation communication;

22. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in paragraph 18 above;

23. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

Annex

Elements of an adaptation communication

An adaptation communication may include information on the following elements:

(a) National circumstances, institutional arrangements and legal frameworks;

(b) Impacts, risks and vulnerabilities, as appropriate;

(c) National adaptation priorities, strategies, policies, plans, goals and actions;

(d) Implementation and support needs of, and provision of support to, developing country Parties;

(e) Implementation of adaptation actions and plans, including:

(i) Progress and results achieved;

(ii) Adaptation efforts of developing countries for recognition;

(iii) Cooperation on enhancing adaptation at the national, regional and international level, as appropriate;

(iv) Barriers, challenges and gaps related to the implementation of adaptation;

(v) Good practices, lessons learned and information-sharing;

(vi) Monitoring and evaluation;

(f) Adaptation actions and/or economic diversification plans, including those that result in mitigation co-benefits;

(g) How adaptation actions contribute to other international frameworks and/or conventions;

(h) Gender-responsive adaptation action and traditional knowledge, knowledge of indigenous peoples and local knowledge systems related to adaptation, where appropriate;

(i) Any other information related to adaptation.

26th plenary meeting
15 December 2018

Decision 10/CMA.1

Modalities and procedures for the operation and use of a public registry referred to in Article 7, paragraph 12, of the Paris Agreement

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling Article 7, paragraphs 11 and 12, of the Paris Agreement,

1. *Decides* to establish the public registry for adaptation communications referred to in Article 7, paragraph 12, of the Paris Agreement to contain adaptation communications submitted by Parties in accordance with Article 7, paragraph 11, of the Paris Agreement;

2. *Also decides* to adopt the modalities and procedures for the operation and use of the public registry referred to in paragraph 1 above as contained in the annex;

3. *Further decides* that the public registry referred to in paragraph 1 above shall be made available by the secretariat, together with the public registry referred to in Article 4, paragraph 12, of the Paris Agreement, through a registry portal with two parts, comprising adaptation communications and nationally determined contributions, respectively;

4. *Requests* the secretariat:

(a) To develop a prototype of the public registry referred to in paragraph 1 above by June 2019, in accordance with the modalities and procedures referred to in paragraph 2 above, and present it to Parties at an event to be held in conjunction with the fiftieth sessions of the subsidiary bodies (June 2019);

(b) To operate the public registry referred to in paragraph 1 above and to provide assistance on its use to Parties, other stakeholders and the public;

5. *Decides* to consider and conclude at its second session (December 2019) whether the prototype referred to in paragraph 4(a) above shall serve as the public registry referred to in Article 7, paragraph 12, of the Paris Agreement;

6. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in paragraph 4 above.

Annex

Modalities and procedures for the operation and use of a public registry referred to in Article 7, paragraph 12, of the Paris Agreement

I. Modalities for the operation of the public registry

1. The public registry referred to in Article 7, paragraph 12, of the Paris Agreement:

(a) Presents the recorded adaptation communications on a separate page for each Party in tabular format, with one row for each adaptation communication and columns displaying, as appropriate: name of Party; document title; document type; hyperlinks to corresponding documents containing the adaptation communications, as appropriate, submitted as a component of or in conjunction with other communications or documents, including a national adaptation plan, a nationally determined contribution and/or a national communication, as referred to in Article 7, paragraph 11, of the Paris Agreement; and version number, status, language and date of submission;

(b) Provides the flexibility for each Party to submit its adaptation communication in the way it wishes;

(c) Has the capability of sorting, recording and displaying adaptation communications;

(d) Preserves the integrity of the adaptation communications in accordance with their country-driven nature;

(e) Avoids unauthorized access to or alteration of its content;

(f) Ensures user-friendly navigation to and between relevant registries and other web resources;

(g) Utilizes relevant web tools to notify users, upon request, of new and modified registry content;

(h) Constitutes an intuitive, easy-to-use web-based platform;

(i) Provides a user-friendly interface in all six official languages of the United Nations.

II. Procedures for the use of the public registry

A. Submission of adaptation communications

2. The secretariat:

(a) Provides each Party with a unique user account for the public registry;

(b) Provides technical assistance to Parties for uploading adaptation communications to the public registry, as required.

3. The national focal point of each Party submits the Party's adaptation communication by uploading it to the registry, or informs the secretariat of the vehicle used as the adaptation communication.

B. Maintaining a record of adaptation communications

4. The public registry constitutes an archive and maintains the hyperlinks of all previously submitted adaptation communications referred to in Article 7, paragraph 11, of the Paris Agreement as a matter of public record.

C. Access to adaptation communications

5. Parties, non-State actors, other stakeholders and the public can view, read and download the adaptation communications from the public registry.

6. To the extent possible, the public registry should be easily accessible to users with slow Internet connections.

III. Roles

7. The national focal point of each Party manages the Party's interaction with the secretariat regarding the adaptation communication in the public registry.

8. The national focal point of each Party is assigned a unique user account to manage the Party's content in the public registry.

9. The secretariat communicates with and provides assistance to Parties using the public registry, including through a user guide, training programmes and online support.

26th plenary meeting
15 December 2018

Decision 11/CMA.1

Matters referred to in paragraphs 41, 42 and 45 of decision 1/CP.21

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling Article 7 of the Paris Agreement,

Also recalling decision 1/CP.21, paragraphs 41, 42 and 45,

Noting with appreciation the technical work undertaken by the Adaptation Committee and the Least Developed Countries Expert Group, in collaboration with the Standing Committee on Finance,[1] in relation to decision 1/CP.21, paragraphs 41, 42 and 45,

I. Ways to enhance the coherence of the work of adaptation-related institutional arrangements

1. *Decides* that the Adaptation Committee and the Least Developed Countries Expert Group shall serve the Paris Agreement;

2. *Assigns* any future and emerging adaptation-related work necessary for the effective implementation of the Paris Agreement to existing institutions;

3. *Encourages* institutional arrangements related to finance, technology development and transfer and capacity-building,[2] in line with their mandates, to strive for a balance between adaptation and mitigation while respecting a country-driven approach;

4. *Invites* partner organizations of the Nairobi work programme on impacts, vulnerability and adaptation to climate change, in collaboration with the Adaptation Committee, to support the work of other adaptation-related institutional arrangements, in particular by providing relevant scientific and technical information and sharing knowledge;

5. *Also invites* the Consultative Group of Experts and the Least Developed Countries Expert Group, in line with their mandates, as appropriate, ensuring efficiency and consistency, to work together on training for assessing vulnerability and other aspects of adaptation;

6. *Requests* the Adaptation Committee, as necessary and in consultation with relevant adaptation-related institutions, to continue to make recommendations in its annual report on enhancing collaboration and promoting coherence and synergies with a view to addressing Parties' evolving adaptation-related needs;

7. *Urges* developed country Parties and *invites* other Parties that provide resources on a voluntary basis to make available sufficient resources for the successful and timely implementation of the work of adaptation-related institutions under the Convention and the Paris Agreement;

[1] See documents FCCC/SB/2017/2, FCCC/SBI/2017/14 and FCCC/SB/2017/2/Add.1–FCCC/SBI/2017/14/Add.1.

[2] The institutional arrangements on finance include the operating entities of the Financial Mechanism of the Convention and the Paris Agreement.

II. Modalities for recognizing the adaptation efforts of developing country Parties

8. *Notes* the existing work of the Adaptation Committee and the Least Developed Countries Expert Group related to synthesizing information on specific adaptation themes and on relevant lessons learned and good practices;

9. *Requests* the secretariat to include in the synthesis report prepared for the global stocktake called for in paragraph 23(b) of decision 19/CMA.1 information on the adaptation efforts of developing country Parties, in order to facilitate recognition of such efforts in the global stocktake, drawing on, inter alia, the most recent documents that may contain adaptation information, which may include adaptation communications, national adaptation plans, national communications, nationally determined contributions, other relevant reports prepared under the transparency framework and reports of the Intergovernmental Panel on Climate Change and other relevant scientific bodies;

10. *Decides* to recognize, guided by the high-level committee and taking into account a country-driven approach, the adaptation efforts of developing country Parties during the high-level events of the global stocktake referred to in paragraph 33 of decision 19/CMA.1;

11. *Requests* the secretariat to prepare a report summarizing the recognition of adaptation efforts of developing country Parties referred to in paragraph 10 above drawing on, inter alia, the synthesis report referred to in paragraph 9 above and the outputs referred to in paragraph 34 of decision 19/CMA.1;

12. *Decides* to make use of existing national, regional and global events, including the NAP Expo and the Adaptation Forum of the Adaptation Committee, to showcase the adaptation efforts of developing country Parties;

13. *Requests* the secretariat, under the guidance of the Adaptation Committee and the Least Developed Countries Expert Group and in collaboration with relevant stakeholders, to prepare synthesis reports every two years starting in 2020 on specific adaptation themes, focusing on relevant lessons learned and good practices in developing country Parties;

14. *Recalls* that the global stocktake will review the overall progress made in achieving the global goal on adaptation and *acknowledges* that adaptation efforts contribute to this objective;

III. Methodologies for assessing adaptation needs with a view to assisting developing countries without placing undue burden on them

15. *Requests* the Adaptation Committee, in collaboration with the Least Developed Countries Expert Group, partner organizations of the Nairobi work programme, users and developers of relevant methodologies, including academia and the private sector, to develop by June 2020 and to regularly update an inventory of relevant methodologies for assessing adaptation needs, including needs related to action, finance, capacity-building and technological support in the context of national adaptation planning and implementation, and to make the information available on the adaptation knowledge portal;[3]

16. *Invites* Parties and observer organizations to submit via the submission portal[4] by February 2021 their views and information on the development and application of methodologies for assessing adaptation needs, including needs related to action, finance, capacity-building and technological support;

17. *Requests* the Adaptation Committee, with the engagement of the Intergovernmental Panel on Climate Change Working Group II, as appropriate, to prepare, drawing on the inventory referred to in paragraph 15 above and the submissions referred to in paragraph 16 above, a technical paper on methodologies for assessing adaptation needs and their

[3] https://www4.unfccc.int/sites/NWPStaging/Pages/Home.aspx.

[4] https://unfccc.int/submissions_and_statements.

application, as well as on the related gaps, good practices, lessons learned and guidelines, for consideration and further guidance by the Subsidiary Body for Scientific and Technological Advice at its fifty-seventh session (November 2022) in the context of its consideration of the report of the Adaptation Committee;

18. *Invites* all relevant entities to further improve the applicability of existing methodologies and tools for assessing adaptation needs related to action, finance, capacity-building and technological support;

19. *Also invites* the World Meteorological Organization, through its Global Framework for Climate Services, with a view to facilitating the development and application of methodologies for assessing adaptation needs, to regularly inform the Subsidiary Body for Scientific and Technological Advice about its activities aimed at improving the availability and accessibility of comprehensive climate information, including observational data, and about how it facilitates the provision and dissemination of the most up-to-date climate model predictions and projections;

20. *Further invites* the Paris Committee on Capacity-building and providers of capacity-building support, as appropriate and in accordance with their mandates, while further enhancing capacity-building efforts, to facilitate the access to and implementation of methodologies for assessing the adaptation needs of developing country Parties in the context of providing support for building adaptive capacity;

IV. Methodologies for taking the necessary steps to facilitate the mobilization of support for adaptation in developing countries

21. *Invites* the Standing Committee on Finance, in line with its mandate and in collaboration with the Technology Executive Committee and the Paris Committee on Capacity-building, to consider, taking into account the recommendations of the Adaptation Committee and the Least Developed Countries Expert Group,[5] as well as relevant submissions from Parties and observer organizations, ways to facilitate the mobilization of support for adaptation in developing countries, in the context of the limit to the increase in the global average temperature referred to in Article 2 of the Paris Agreement, and to include recommendations in its annual report;

22. *Also invites* Parties to further enhance their enabling environments, policy frameworks, institutions and national public financial management systems with a view to improving access to international public support, as appropriate, and to enhancing the involvement of the private sector;

23. *Urges* developed country Parties and *invites* other Parties that provide resources on a voluntary basis, United Nations entities and other relevant organizations, as well as bilateral and multilateral agencies, to assist the least developed country Parties and other developing country Parties, drawing on the work of the Adaptation Committee, the Least Developed Countries Expert Group and other relevant bodies, as appropriate, in building or strengthening their enabling environments, policy frameworks, institutions and national public financial management systems so as to mobilize support for adaptation, in particular capacity-building, including as part of the process to formulate and implement national adaptation plans;

24. *Invites* Parties to continue engaging in adaptation planning processes and the implementation of action, including the process to formulate and implement national adaptation plans;

25. *Takes note* of the resources available through the operating entities of the Financial Mechanism for strengthening developing country Parties' institutional capacity for programming their priority climate actions and for tracking and reporting climate finance;

[5] As footnote 1 above.

26. *Invites* Parties and relevant actors to ensure, as appropriate, that steps are taken to identify and subsequently remove perverse incentives that could result in non-resilient investments and planning decisions;

27. *Requests* Parties to report on support provided and received in line with the reporting instruments and modalities being developed under the Paris Agreement;

28. *Invites* the operating entities of the Financial Mechanism, in line with their mandates, to seek to ensure that the provision of financial support to developing country Parties is balanced between adaptation and mitigation activities;

29. *Requests* the Technology Executive Committee and the Climate Technology Centre and Network to facilitate, in line with their mandates, the provision of support for technology development and transfer for adaptation in developing country Parties, promoting a balance between adaptation and mitigation activities;

30. *Invites* the Paris Committee on Capacity-building to enhance and facilitate the provision of support for capacity-building for adaptation in developing country Parties, promoting a balance between adaptation and mitigation activities;

31. *Requests* the secretariat to include in the synthesis report prepared for the global stocktake called for in paragraph 23(b) of decision 19/CMA.1 an assessment of the support needs for adaptation of developing country Parties drawing on, inter alia, the most recent documents that may contain adaptation information, which may include adaptation communications, national adaptation plans, national communications, nationally determined contributions, other relevant reports prepared under the transparency framework, reports of the Intergovernmental Panel on Climate Change and other relevant scientific bodies as well as the report referred to in paragraph 13 of decision 4/CP.24;

V. Methodologies for reviewing the adequacy and effectiveness of adaptation and support

32. *Notes* the constraints encountered by the Adaptation Committee and the Least Developed Countries Expert Group in developing methodologies, including the differences in national circumstances in relation to adaptation, the difficulty of setting adaptation baselines and targets and the lack of common metrics for measuring progress on adaptation;

33. *Also notes* that the current state of knowledge is not sufficient to address the mandate[6] and requires time and effort to advance;

34. *Invites* Parties, academia and other relevant stakeholders to undertake further technical work, building on the existing work of the Adaptation Committee and the Least Developed Countries Expert Group, in collaboration with the Standing Committee on Finance, and taking into consideration ongoing relevant work under and outside the Convention, on developing methodologies for reviewing the adequacy and effectiveness of adaptation and support;

35. *Also invites* the Adaptation Committee and the Least Developed Countries Expert Group, in collaboration with the Standing Committee on Finance, and relevant experts to contribute to the technical work referred to in paragraph 34 above by continuing to compile existing methodologies for reviewing the adequacy and effectiveness of adaptation and support;

36. *Further invites* Parties, United Nations entities and other relevant organizations, as well as bilateral and multilateral agencies, to submit by April 2020 to the Adaptation Committee and the Least Developed Countries Expert Group information on gaps, challenges, opportunities and options associated with methodologies for reviewing the adequacy and effectiveness of adaptation and support, including in the areas of adaptation needs, plans and strategies; enabling environments and policy frameworks; frameworks used for assessing the effectiveness of adaptation efforts; efforts and systems to monitor and evaluate the effectiveness of adaptation efforts; support through all instruments and

[6] Decision 1/CP.21, paragraph 45(b).

channels, including domestic, international, public and private sources and progress towards the implementation and achievement of adaptation goals, plans and strategies;

37. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in paragraphs 9, 11, 13 and 31 above;

38. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

26th plenary meeting
15 December 2018

Decision 12/CMA.1

Identification of the information to be provided by Parties in accordance with Article 9, paragraph 5, of the Paris Agreement

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling Articles 4 and 11 of the Convention,

Also recalling Article 9, paragraphs 1–5, of the Paris Agreement,

Further recalling Articles 3, 4, 7, 10, 11 and 14 of the Paris Agreement,

Recalling decisions 3/CP.19, 1/CP.21, 13/CP.22 and 12/CP.23,

Underscoring the need for continued and enhanced international support for the implementation of the Paris Agreement,

1. *Recognizes* the importance of predictability and clarity of information on financial support for the implementation of the Paris Agreement;

2. *Reiterates* that developed country Parties shall biennially communicate indicative quantitative and qualitative information related to Article 9, paragraphs 1 and 3, of the Paris Agreement, as applicable, including, as available, projected levels of public financial resources to be provided to developing country Parties, and that other Parties providing resources are encouraged to communicate biennially such information on a voluntary basis;

3. *Underlines* the importance of Article 9, paragraphs 1 and 3, of the Paris Agreement on this matter;

4. *Requests* developed country Parties to submit the biennial communications referred to in paragraph 2 above and as specified in the annex starting in 2020;

5. *Encourages* other Parties providing resources to communicate biennially, as referred to in paragraph 2 above, on a voluntary basis;

6. *Requests* the secretariat to establish a dedicated online portal for posting and recording the biennial communications;

7. *Also requests* the secretariat to prepare a compilation and synthesis of the information included in the biennial communications, referred to in paragraph 2 above, starting in 2021, and to inform the global stocktake;

8. *Further requests* the secretariat to organize biennial in-session workshops beginning the year after the submission of the first biennial communications referred to in paragraph 2 above, and to prepare a summary report on each workshop;

9. *Decides* to consider the compilations and syntheses referred to in paragraph 7 above and the summary reports on the in-session workshops referred to in paragraph 8 above starting at its fourth session (November 2021);

10. *Also decides* to convene a biennial high-level ministerial dialogue on climate finance beginning in 2021, to be informed, inter alia, by the summary reports on the in-session workshops referred to in paragraph 8 above and the biennial communications referred to in paragraph 2 above;

11. *Requests* the President of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement to summarize the deliberations of the dialogue referred to in paragraph 10 above for consideration by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its succeeding session;

12. *Invites* the Conference of the Parties to consider the compilations and syntheses and the summary reports on the in-session workshops referred to in paragraphs 7 and 8 above, respectively;

13. *Decides* to consider updating the types of information contained in the annex at its sixth session (2023) on the basis of Parties' experience and lessons learned in the preparation of their biennial communications of indicative quantitative and qualitative information;

14. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat pursuant to the provisions contained in paragraphs 6–8 and 10 above;

15. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

Annex

Types of information to be provided by Parties in accordance with Article 9, paragraph 5, of the Paris Agreement

Developed country Parties shall biennially communicate indicative quantitative and qualitative information related to Article 9, paragraphs 1 and 3, of the Paris Agreement, as applicable, including, as available, projected levels of public financial resources to be provided to developing country Parties. Other Parties providing resources are encouraged to communicate biennially such information on a voluntary basis. This should include:

(a) Enhanced information to increase clarity on the projected levels of public financial resources to be provided to developing countries, as available;

(b) Indicative quantitative and qualitative information on programmes, including projected levels, channels and instruments, as available;

(c) Information on policies and priorities, including regions and geography, recipient countries, beneficiaries, targeted groups, sectors and gender responsiveness;

(d) Information on purposes and types of support: mitigation, adaptation, cross-cutting activities, technology transfer and capacity-building;

(e) Information on the factors that providers of climate finance look for in evaluating proposals, in order to help to inform developing countries;

(f) An indication of new and additional resources to be provided, and how it determines such resources as being new and additional;

(g) Information on national circumstances and limitations relevant to the provision of ex ante information;

(h) Information on relevant methodologies and assumptions used to project levels of climate finance;

(i) Information on challenges and barriers encountered in the past, lessons learned and measures taken to overcome them;

(j) Information on how Parties are aiming to ensure a balance between adaptation and mitigation, taking into account the country-driven strategies and the needs and priorities of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change and have significant capacity constraints, such as the least developed countries and small island developing States, considering the need for public and grant-based resources for adaptation;

(k) Information on action and plans to mobilize additional climate finance as part of the global effort to mobilize climate finance from a wide variety of sources, including on the relationship between the public interventions to be used and the private finance mobilized;

(l) Information on how financial support effectively addresses the needs and priorities of developing country Parties and supports country-driven strategies;

(m) Information on how support provided and mobilized is targeted at helping developing countries in their efforts to meet the long-term goals of the Paris Agreement, including by assisting them in efforts to make finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development;

(n) Information on efforts to integrate climate change considerations, including resilience, into their development support;

(o) Information on how support to be provided to developing country Parties enhances their capacities.

26th plenary meeting
15 December 2018

United Nations

Framework Convention on Climate Change

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Conference of the Parties serving as the meeting of the Parties to the Paris Agreement

Report of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement on the third part of its first session, held in Katowice from 2 to 15 December 2018

Addendum

Part two: Action taken by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement

Contents

Decisions adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement

Decision		*Page*
13/CMA.1	Matters relating to the Adaptation Fund	2
14/CMA.1	Setting a new collective quantified goal on finance in accordance with decision 1/CP.21, paragraph 53	3
15/CMA.1	Technology framework under Article 10, paragraph 4, of the Paris Agreement	4
16/CMA.1	Scope of and modalities for the periodic assessment referred to in paragraph 69 of decision 1/CP.21	11
17/CMA.1	Ways of enhancing the implementation of education, training, public awareness, public participation and public access to information so as to enhance actions under the Paris Agreement	15
18/CMA.1	Modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement	18
19/CMA.1	Matters relating to Article 14 of the Paris Agreement and paragraphs 99–101 of decision 1/CP.21	53
20/CMA.1	Modalities and procedures for the effective operation of the committee to facilitate implementation and promote compliance referred to in Article 15, paragraph 2, of the Paris Agreement	59
Resolution		
3/CMA.1	Expression of gratitude to the Government of the Republic of Poland and the people of the city of Katowice	65

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Decision 13/CMA.1

Matters relating to the Adaptation Fund

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

1. *Decides* that the Adaptation Fund shall serve the Paris Agreement under the guidance of, and be accountable to, the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement with respect to all matters relating to the Paris Agreement, effective 1 January 2019, subject to the decision on this matter made by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol;

2. *Recommends* that the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol decide that the Adaptation Fund will continue to be financed by the activities under Articles 6, 12 and 17 of the Kyoto Protocol;

3. *Also recommends* to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol that the Adaptation Fund shall exclusively serve the Paris Agreement once the share of proceeds under Article 6, paragraph 4, of the Paris Agreement becomes available;

4. *Invites* the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol to ensure that developing country Parties and developed country Parties that are Parties to the Paris Agreement are eligible for membership on the Adaptation Fund Board;

5. *Decides* that, when the Adaptation Fund serves the Paris Agreement, it shall be financed from the share of proceeds from the mechanism established by Article 6, paragraph 4, of the Paris Agreement and from a variety of voluntary public and private sources;

6. *Invites* the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol to request the Adaptation Fund Board to consider the rules of procedure of the Board, the arrangements of the Adaptation Fund with respect to the Paris Agreement and the implications of the Adaptation Fund receiving the share of proceeds from activities under Articles 6, 12 and 17 of the Kyoto Protocol when the Adaptation Fund serves the Paris Agreement, with a view to forwarding recommendations to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement for consideration at its second session (December 2019).

26th plenary meeting
15 December 2018

Decision 14/CMA.1

Setting a new collective quantified goal on finance in accordance with decision 1/CP.21, paragraph 53

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling decision 1/CP.21, paragraph 53,

1. *Decides* to initiate at its third session (November 2020), in accordance with Article 9, paragraph 3, of the Paris Agreement, deliberations on setting a new collective quantified goal from a floor of USD 100 billion per year in the context of meaningful mitigation actions and transparency of implementation and taking into account the needs and priorities of developing countries;

2. *Agrees* to consider, in its deliberations referred to in paragraph 1 above, the aim to strengthen the global response to the threat of climate change in the context of sustainable development and efforts to eradicate poverty, including by making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.

26th plenary meeting
15 December 2018

Decision 15/CMA.1

Technology framework under Article 10, paragraph 4, of the Paris Agreement

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling Article 10, paragraph 1, of the Paris Agreement, regarding the long-term vision for technology development and transfer,

Also recalling Article 10, paragraphs 3 and 4, of the Paris Agreement,

Further recalling decision 1/CP.21, paragraphs 67 and 68,

Recognizing the need to ensure that the operationalization of the technology framework undertaken by the Technology Mechanism to support the achievement of the Paris Agreement is consistent with the long-term vision for technology development and transfer and Article 2 of the Paris Agreement,

Noting with appreciation the work undertaken by the Subsidiary Body for Scientific and Technological Advice in elaborating the technology framework in accordance with decision 1/CP.21, paragraph 67,

1. *Adopts* the technology framework under Article 10, paragraph 4, of the Paris Agreement as elaborated in the annex;

2. *Decides* that the Technology Executive Committee and the Climate Technology Centre and Network, consistently with their respective functions, mandates and modalities of work, shall implement the technology framework in close collaboration under the guidance of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

3. *Requests* the Technology Executive Committee and the Climate Technology Centre and Network:

(a) To incorporate the guidance contained in the technology framework into their respective workplans and programmes of work, which should also include methods for the monitoring and evaluation of their activities;

(b) To include information in their joint annual report for 2019 on how they incorporated the guidance contained in the technology framework into their respective workplans and programmes of work as referred to in paragraph 3(a) above;

4. *Takes note* of the recommendation of the Technology Executive Committee and the Climate Technology Centre and Network to prepare and submit their joint annual report to both the Conference of the Parties and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;[1]

5. *Requests* the Technology Executive Committee and the Climate Technology Centre and Network to report on the progress of their work and challenges and lessons learned in implementing the technology framework in their joint annual reports;

6. *Reiterates* the importance of the support, including financial support, that shall be provided to developing country Parties for strengthening cooperative action on technology development and transfer at different stages of the technology cycle, and *agrees* that the technology framework can facilitate the strengthening of such support;

7. *Decides* that the outcome of and/or recommendations resulting from the periodic assessment referred to in decision 1/CP.21, paragraph 69, shall be considered when updating the technology framework;

8. *Requests* the secretariat to facilitate the implementation of the technology framework;

[1] FCCC/SB/2017/3, paragraph 43.

9. *Also requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

Annex

Technology framework under Article 10, paragraph 4, of the Paris Agreement

I. Purpose

1. The purpose of the technology framework under the Paris Agreement is to provide overarching guidance to the work of the Technology Mechanism in promoting and facilitating enhanced action on technology development and transfer in order to support the implementation of the Paris Agreement in pursuit of the long-term vision referred to in its Article 10, paragraph 1. The long-term vision for technology development and transfer shared by Parties relates to the importance of fully realizing technology development and transfer in order to improve resilience to climate change and reduce greenhouse gas emissions.

2. The technology framework can play a strategic role in improving the effectiveness and efficiency of the work of the Technology Mechanism, which consists of the Technology Executive Committee (TEC) and the Climate Technology Centre and Network (CTCN), by addressing the transformational changes envisioned in the Paris Agreement and the long-term vision for technology development and transfer.

II. Principles

3. The principles of the technology framework, which are coherence, inclusiveness, results-oriented approach, transformational approach and transparency, should guide the Technology Mechanism in implementing the Paris Agreement, as follows:

(a) Align with the long-term vision for technology development and transfer and other provisions of the Paris Agreement, national plans and strategies under the Convention and actions undertaken by relevant institutions in the international climate regime and beyond;

(b) Be designed and implemented in a manner that facilitates the active participation of all relevant stakeholders and takes into account sustainable development, gender, the special circumstances of the least developed countries and small island developing States, and the enhancement of indigenous capacities and endogenous technologies;

(c) Be results-oriented in terms of output, outcome and impact;

(d) Address the transformational changes envisioned in the Paris Agreement;

(e) Be designed and implemented in a manner that enhances the transparency of the results, costs and process, such as through planning, resource management and reporting on activities and support.

III. Key themes

4. The following key themes for the technology framework represent focused areas of action to be undertaken under the framework:

(a) Innovation;

(b) Implementation;

(c) Enabling environment and capacity-building;

(d) Collaboration and stakeholder engagement;

(e) Support.

A. Innovation

5. As stipulated in Article 10, paragraph 5, of the Paris Agreement, accelerating, encouraging and enabling innovation is critical for an effective, long-term global response to climate change and promoting economic growth and sustainable development. To achieve the purpose and goals of the Paris Agreement, there is a pressing need to accelerate and strengthen technological innovation so that it can deliver environmentally and socially sound, cost-effective and better-performing climate technologies on a larger and more widespread scale.

6. Actions and activities under this key theme should therefore accelerate and scale up innovation at different stages of the technology cycle, addressing both adaptation and mitigation in a balanced manner to help countries to build resilience and reduce their emissions, and be undertaken in a manner that enhances the effective participation of developing country Parties, fosters sustainable development and ensures gender responsiveness.

7. Fostering innovation could be done through new collaborative approaches to climate technology research, development and demonstration (RD&D); the creation and promotion of relevant enabling policy to incentivize and nurture a supportive environment for innovation; and the active engagement of the private sector and closer collaboration between the public and private sector.

8. Actions and activities in this area of work include:

(a) Supporting countries in incentivizing innovation by improving the policy environments, strategies, legal and regulatory frameworks, and institutional arrangements for establishing and/or strengthening their national systems of innovation;

(b) Providing information and facilitating the sharing of information on international technology RD&D partnerships and initiatives, good practices and lessons learned from countries' climate technology RD&D policies and activities;

(c) Promoting the development, deployment and dissemination of existing innovative technologies and accelerating the scale-up and diffusion of emerging climate technologies;

(d) Supporting countries in developing long-term technological transition pathways towards the widespread uptake of climate technologies in the context of climate resilience and low greenhouse gas emission development;

(e) Promoting collaboration with international technology RD&D partnerships and initiatives to stimulate climate technology RD&D;

(f) Supporting countries in initiating joint climate technology RD&D activities;

(g) Identifying ways to increase the effective participation of developing country Parties in collaborative approaches to RD&D;

(h) Promoting the engagement of the private sector in the development of new and innovative climate technologies, including through:

(i) Raising awareness of future market opportunities in climate technology innovation;

(ii) Identifying ways to incentivize their participation;

(i) Promoting partnerships between the public and private sector in the development and transfer of climate technologies.

B. Implementation

9. The Paris Agreement highlights the importance of technology for the implementation of mitigation and adaptation actions under the Agreement. The Technology Mechanism should facilitate and promote enhanced action on technology to help countries to achieve the

purpose and goals of the Paris Agreement, while at the same time recognizing the importance of rapidly accelerating the transformational changes towards climate resilience and low greenhouse gas emission development.

10. Actions and activities under this key theme should therefore facilitate the implementation of collaborative technology development and transfer, build on the past and ongoing work of the Technology Mechanism and take into account the role of North–South, South–South, triangular and regional collaboration in facilitating implementation.

11. Actions and activities under this key theme should also facilitate the implementation of mitigation and adaptation action identified using planning tools and processes such as nationally determined contributions, long-term low greenhouse gas emission development strategies, technology needs assessments (TNAs), national adaptation plans, technology road maps and other relevant policies, and facilitate overcoming challenges by implementing such action, as appropriate.

12. Actions and activities in this area of work include:

(a) Facilitating the undertaking and updating of TNAs, as well as enhancing the implementation of their results, particularly technology action plans and project ideas, and capacity-building related to TNAs;

(b) Promoting the link or alignment of TNAs with nationally determined contributions and national adaptation plans in order to increase coherence between the implementation of those national plans with national strategies to achieve climate-resilient and low-emission development;

(c) Reviewing the TNA guidelines and updating them as necessary with a view to TNAs leading to plans and implementation that are aligned with the transformational changes envisioned in the Paris Agreement;

(d) Identifying and developing recommendations on approaches, tools and means, as appropriate, for the assessment of the technologies that are ready to transfer;

(e) Identifying and developing recommendations for the enhancement of enabling environments for and the addressing of barriers to the development and transfer of socially and environmentally sound technologies.

C. Enabling environment and capacity-building

13. In the context of technology development and transfer, countries may face various challenges. Creating and enhancing enabling environments for the development and transfer of socially and environmentally sound technologies should consider the challenges faced by countries, and the different needs of the countries in overcoming such challenges.

14. Capacity-building for technology development and transfer is a cross-cutting and comprehensive issue. Although initiatives and activities on capacity-building for technology development and transfer are already being undertaken, further measures in this area are needed to develop, strengthen and enhance countries' capabilities to take effective climate action in the context of the Paris Agreement.

15. Actions and activities under this key theme should therefore foster the creation and enhancement of an enabling environment, including policy and regulatory environments for technology development and transfer, and strengthen the capacity of countries to effectively address various challenges.

16. Actions and activities in this area of work include:

(a) Enhancing public awareness on climate technology development and transfer;

(b) Facilitating countries in enhancing an investment-friendly environment, including national strategies and action plans, a policy environment, legal and regulatory frameworks and other institutional arrangements;

(c) Facilitating countries in enhancing an enabling environment to promote endogenous and gender-responsive technologies for mitigation and adaptation actions;

(d) Assisting countries in developing and implementing policies for enabling environments to incentivize the private and public sector to fully realize the development and transfer of climate technologies;

(e) Assisting governments in playing a key role in fostering private sector involvement by designing and implementing policies, regulations and standards that create enabling environments and favourable market conditions for climate technologies;

(f) Facilitating information-sharing and networking among relevant organizations and institutions to create synergies and to enable the exchange among relevant players of best practices, experience and knowledge on technology development and transfer;

(g) Formulating and analysing information on capacity-building activities at different stages of the technology cycle;

(h) Catalysing the development and enhancement of endogenous capacities for climate-related technologies and harnessing indigenous knowledge;

(i) Enhancing collaboration with existing capacity-building organizations and institutions, including those under the Convention, to create synergies in a manner that enhances efficiency and avoids duplication of work;

(j) Enhancing the capacity of national designated entities (NDEs) of all Parties, especially those in developing countries, to fulfil their roles;

(k) Enhancing the capacities of Parties to plan, monitor and achieve technological transformation in accordance with the purpose and goals of the Paris Agreement.

D. Collaboration and stakeholder engagement

17. Collaboration with and engagement of stakeholders will enhance interaction between those involved in the development and transfer of climate technology and help to share knowledge and mobilize support. In this context, stakeholders will provide important input to the work of the Technology Mechanism.

18. Therefore, the Technology Mechanism shall work in an open and inclusive, including gender-responsive, manner whereby stakeholders are invited to participate and actively engage. Collaboration with and engagement of stakeholders should take place at different stages of the technology cycle.

19. Enhanced engagement of stakeholders at the local, regional, national and global level will be beneficial for the Technology Mechanism. Further, activities for cooperation on technology development and transfer across relevant organizations, institutions and initiatives should be harmonized and synergized to avoid duplication and ensure consistency and coherence.

20. Actions and activities in this area of work include:

(a) Enhancing engagement and collaboration with relevant stakeholders, including local communities and authorities, national planners, the private sector and civil society organizations, in the planning and implementation of Technology Mechanism activities;

(b) Enhancing engagement and collaboration with the private sector, on a voluntary basis, to leverage expertise, experience and knowledge regarding effective enabling environments that support the implementation of the Paris Agreement;

(c) Enhancing engagement between NDEs and relevant stakeholders, including by providing guidance and information;

(d) Enhancing collaboration and synergy with relevant international organizations, institutions and initiatives, including academia and the scientific community, to leverage their specific expertise, experience, knowledge and information, particularly on new and innovative technologies.

E. Support

21. Article 10, paragraph 6, of the Paris Agreement states that support, including financial support, shall be provided to developing country Parties for the implementation of that Article, including for strengthening cooperative action on technology development and transfer at different stages of the technology cycle, with a view to achieving a balance between support for mitigation and adaptation.

22. The understanding of support under this key theme is broader than just financial support, as it may include all aspects of support for the implementation of Article 10 of the Paris Agreement. The support should be provided for all key themes of the technology framework, taking into account the gender perspective and endogenous and indigenous aspects.

23. The provision and mobilization of various types of support coming from a wide variety of sources are crucial to implementing Article 10 of the Paris Agreement and can enhance cooperative action on technology development and transfer.

24. Monitoring and evaluation of the Technology Mechanism can enhance the effectiveness of the support provided.

25. Actions and activities in this area of work include:

(a) Enhancing the collaboration of the Technology Mechanism with the Financial Mechanism for enhanced support for technology development and transfer;

(b) Identifying and promoting innovative finance and investment at different stages of the technology cycle;

(c) Providing enhanced technical support to developing country Parties, in a country-driven manner, and facilitating their access to financing for innovation, including for RD&D, enabling environments and capacity-building, developing and implementing the results of TNAs, and engagement and collaboration with stakeholders, including organizational and institutional support;

(d) Enhancing the mobilization of various types of support, including pro bono and in-kind support, from various sources for the implementation of actions and activities under each key theme of the technology framework;

(e) Developing and/or enhancing a system for monitoring and tracking of actions and activities undertaken, and support received, by the Technology Mechanism to implement the technology framework, with a view to such information maybe also contributing to the enhanced transparency framework referred to in Article 13 and the global stocktake referred to in Article 14 of the Paris Agreement.

26th plenary meeting
15 December 2018

Decision 16/CMA.1

Scope of and modalities for the periodic assessment referred to in paragraph 69 of decision 1/CP.21

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling decision 1/CP.21, in particular paragraph 69, and decision 1/CP.23,

1. *Adopts* the scope of and modalities for the periodic assessment of the effectiveness and adequacy of the support provided to the Technology Mechanism in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer, in accordance with decision 1/CP.21, as contained in the annex;

2. *Decides* that the periodic assessment referred to in paragraph 1 above should be undertaken in a transparent, inclusive and participatory manner;

3. *Also decides* to initiate the first periodic assessment referred to in paragraph 1 above at its fourth session (November 2021) in accordance with the scope and modalities as contained in the annex, or as these may be subsequently amended, with a view to completing the first periodic assessment at its fifth session (November 2022);

4. *Further decides* that the outcomes of the periodic assessment referred to in paragraph 1 above should serve as an input to the global stocktake referred to in Article 14 of the Paris Agreement;

5. *Decides* that the outcome of the periodic assessment should guide improved effectiveness and enhanced support to the Technology Mechanism in supporting the implementation of the Paris Agreement;

6. *Requests* the Subsidiary Body for Implementation to initiate, at its fifty-first session (December 2019), consideration of the alignment between processes pertaining to the review of the Climate Technology Centre and Network[1] and the periodic assessment referred to in paragraph 1 above with a view to recommending a draft decision for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its third session (November 2020);

7. *Also requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

[1] In accordance with decisions 2/CP.17, 14/CP.18 and 12/CP.24.

Annex

Scope of and modalities for the periodic assessment referred to in paragraph 69 of decision 1/CP.21

I. Scope

1. The mandate is to undertake a periodic assessment of the effectiveness and adequacy of the support provided to the Technology Mechanism in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer (hereinafter referred to as the periodic assessment).[1] The scope has two elements:[2]

(a) The effectiveness of the Technology Mechanism in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer;

(b) The adequacy of support provided to the Technology Mechanism in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer.

A. Effectiveness of the Technology Mechanism

2. On the effectiveness of the Technology Mechanism in supporting the implementation of the Paris Agreement, as guided by the technology framework,[3] the scope may include the assessment of the impact, outputs and outcomes of the Technology Mechanism, in particular, how it has:

(a) Facilitated the transformational changes envisioned in the Paris Agreement;

(b) Contributed to the achievement of the long-term vision referred to in Article 10, paragraph 1, of the Paris Agreement;

(c) Contributed to strengthening cooperative action on technology development and transfer;

(d) Enhanced the implementation of the technology elements of nationally determined contributions and technology needs assessments;

(e) Resulted in quantitative impacts through technical assistance, including potential emission reductions, the number of technology solutions delivered, and investments leveraged;

(f) Undertaken its work in a cost-effective and efficient manner;

(g) Achieved success in terms of how the bodies of the Technology Mechanism have implemented their workplans;

(h) Overcome challenges;

(i) Identified opportunities for improvement;

(j) Collaborated with other stakeholders in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer;

(k) Responded to the overarching guidance provided by the technology framework referred to in Article 10 of the Paris Agreement, including aligning its work with the themes of the technology framework;

[1] Decision 1/CP.21, paragraph 69.
[2] See document FCCC/SBI/2016/8, paragraph 94.
[3] Decision 15/CMA.1.

(l) Responded to existing mandates under the Paris Agreement and to guidance from Parties.

3. To undertake the assessment of effectiveness referred to in paragraph 2 above, the work of the Technology Mechanism in supporting the implementation of the Paris Agreement on matters relating to cooperative action on technology development and transfer to be assessed may include:

(a) The work of the Technology Executive Committee (TEC) in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer;

(b) The work of the Climate Technology Centre and Network (CTCN) in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer, including in relation to:

(i) The implementation of its three core services: responding to requests from developing countries; fostering collaboration and sharing of information; and strengthening networks, partnerships and capacity-building;

(ii) Its institutional arrangements;

(c) The collaboration between the TEC and the CTCN, and the linkages between these bodies and institutional arrangements under the Paris Agreement;

(d) The work on technology needs assessments and the implementation of technology action plans to support the implementation of the Paris Agreement on matters relating to technology development and transfer.

B. Adequacy of the support provided to the Technology Mechanism

4. On the adequacy of the support provided to the Technology Mechanism[4] in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer, the scope may include, but is not limited to, the assessment of:

(a) The recipients of the support provided:

(i) The TEC;

(ii) The CTCN, including the national designated entities;

(b) The sources of support provided;

(c) The types of support provided;

(d) How the support provided was used, taking into account actions at the different stages of the technology cycle:

(i) Mitigation actions;

(ii) Adaptation actions;

(iii) Cross-cutting actions;

(e) The level of support provided and whether it has changed over time;

(f) The extent to which the support has met the budgets and plans of the Technology Mechanism.

II. Modalities

5. The scope and modalities for the periodic assessment of the effectiveness and adequacy of the support provided to the Technology Mechanism should follow international

[4] In line with decision 2/CP.17, paragraphs 139–141.

best practices for conducting assessments. These best practices include the following five evaluation criteria categories: relevance, effectiveness, efficiency, impact and sustainability.

6. The periodic assessment is undertaken by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA). The CMA:

(a) Initiates the periodic assessment in accordance with paragraph 10 below;

(b) Provides guidance to the secretariat and requests it to prepare interim and final reports on the periodic assessment;

(c) Finalizes the periodic assessment, with possible outputs in accordance with paragraph 11 below.

7. The Subsidiary Body for Implementation (SBI) supports the CMA by:

(a) Considering the interim report and providing guidance to the secretariat for preparing the final report. The SBI does this in its first sessional period in the year after that in which the CMA initiated the assessment;

(b) Preparing draft recommendations for consideration and adoption by the CMA, as appropriate, based on a consideration of the final report.

8. The periodic assessment is both qualitative and quantitative:

(a) Qualitative elements may include reviewing existing reports and gathering information from stakeholders;

(b) Quantitative elements may include collecting data and undertaking statistical analysis.

9. The sources of information for the periodic assessment include, but are not limited to:

(a) The technology framework;

(b) The joint annual reports of the TEC and the CTCN to the CMA;

(c) Other UNFCCC reporting documents and processes relevant to the implementation of the Paris Agreement on matters relating to technology development and transfer;

(d) Information provided by relevant stakeholders;

(e) Documents and outcomes resulting from the independent reviews of the CTCN;

(f) Where relevant, reports of the Intergovernmental Panel on Climate Change.

10. The periodic assessment:

(a) Is undertaken every five years;

(b) Takes one year or less to complete.

11. The outputs of the periodic assessment include, as appropriate:

(a) A report to the CMA through the SBI;

(b) Recommendations of the CMA on updating the technology framework.

26th plenary meeting
15 December 2018

Decision 17/CMA.1

Ways of enhancing the implementation of education, training, public awareness, public participation and public access to information so as to enhance actions under the Paris Agreement

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling Article 12 of the Paris Agreement, which provides that Parties shall cooperate in taking measures, as appropriate, to enhance climate change education, training, public awareness, public participation and public access to information,

Reaffirming the importance of all elements of Article 6 of the Convention and of Article 12 of the Paris Agreement for the implementation of the ultimate objective of the Convention and the Paris Agreement, respectively,

Recognizing the key role that Action for Climate Empowerment can play at all stages and levels of the implementation of the Paris Agreement,

Recalling decision 15/CP.18, which established the Doha work programme on Article 6 of the Convention and defined key areas of work and activities for the implementation of Article 6 of the Convention,

Also recalling decision 17/CP.22, in which it was decided that efforts related to the implementation of Article 6 of the Convention shall be referred to as Action for Climate Empowerment,

Recognizing that Action for Climate Empowerment plays a key role in promoting changes in lifestyles, attitudes and behaviours needed to foster low-emission, climate-resilient and sustainable development,

Reaffirming the key role that a broad range of stakeholders, inter alia national governments, regions as applicable, cities, education and cultural institutions, museums, the private sector, intergovernmental organizations, non-governmental organizations, international organizations, decision makers, scientists, the media, teachers, youth, women and indigenous peoples, play in ensuring Action for Climate Empowerment,

Acknowledging the importance of linkages between activities taken to support Article 6 of the Convention, Article 12 of the Paris Agreement and the Sustainable Development Goals,

1. *Decides* that efforts related to the implementation of Article 12 of the Paris Agreement will also be referred to as Action for Climate Empowerment;

2. *Invites* the Conference of the Parties, when reviewing the Doha work programme on Article 6 of the Convention in accordance with decision 15/CP.18, to also include efforts related to the implementation of Article 12 of the Paris Agreement;

3. *Decides* that the focal points nominated under Article 6 of the Convention will also serve as focal points under Article 12 of the Paris Agreement and will be referred to as Action for Climate Empowerment focal points in the context of the Paris Agreement as well;

4. *Encourages* Parties that have not already designated an Action for Climate Empowerment focal point to do so and to provide the necessary institutional support for the focal point's activities, as appropriate;

5. *Also encourages* Parties to continue to promote the systematic integration of gender-sensitive and participatory education, training, public awareness, public participation, public access to information, and regional and international cooperation into all mitigation and adaptation activities implemented under the Convention, as well as under the Paris Agreement, as appropriate, including into the processes of designing and implementing their nationally determined contributions, national adaptation plans, long-term low greenhouse gas emission development strategies and climate policies;

6. *Invites* Parties to develop and implement national strategies on Action for Climate Empowerment in relation to Article 12 of the Paris Agreement taking into account their national circumstances;

7. *Also invites* Parties and non-Party stakeholders to consider relevant activities that enhance Action for Climate Empowerment, as referred to in the reports on the Action for Climate Empowerment workshop[1] held at the first part of the forty-eighth session of the Subsidiary Body for Implementation and the Action for Climate Empowerment youth forum,[2] when developing and implementing Action for Climate Empowerment, taking into consideration national circumstances;

8. *Encourages* Parties to include, as appropriate, information on how education, training, public awareness, public participation, public access to information, and regional and international cooperation are considered in the preparation and implementation of the actions under the Paris Agreement;

9. *Considers* that Parties and stakeholders may, as appropriate, take into account actions to enhance climate change education, training, public awareness, public participation, public access to information, and regional and international cooperation in the context of Article 14 of the Paris Agreement;

10. *Encourages* Parties to foster public participation and collaborate with, inter alia, regional as applicable and local authorities, the scientific community, universities, the private sector, civil society organizations and youth to scale up the implementation of Action for Climate Empowerment;

11. *Invites* Parties, multilateral and bilateral institutions, private sector and other potential sources to support activities related to the implementation of Article 12 of the Paris Agreement;

12. *Requests* the secretariat:

(a) To continue organizing, in collaboration with Parties and international organizations, training, workshops, webinars and other activities to exchange good practices and to build and strengthen existing skills and the capacity of the Action for Climate Empowerment national focal points and stakeholders;

(b) To organize the 7th Dialogue on Action for Climate Empowerment in 2019 to advance the discussions on the final review of the Doha work programme and ways of enhancing the implementation of education, training, public awareness, public participation, public access to information, and international and regional cooperation so as to also enhance actions under Article 12 of the Paris Agreement;

(c) To continue organizing awareness-raising campaigns and training activities to empower children and youth to support and lead climate action;

(d) To continue collaborating with Parties, non-Party stakeholders and regional and international organizations with a view to catalysing the implementation of Article 12 of the Paris Agreement;

[1] See https://unfccc.int/sites/default/files/resource/Action%20for%20Climate%20Empowerment%20Workshop%20outcomes.pdf.

[2] See https://unfccc.int/sites/default/files/resource/180505_Outcomes%20AYF%20-%20Final.pdf.

13. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in paragraph 12 above;

14. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

26th plenary meeting
15 December 2018

Decision 18/CMA.1

Modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling the Paris Agreement, adopted under the Convention, in particular Article 2, paragraph 2, and Article 13, including paragraphs 1, 14 and 15,

Also recalling decision 1/CP.21,

Recognizing that the Capacity-building Initiative for Transparency, established pursuant to decision 1/CP.21, paragraph 84, will continue to support developing country Parties, upon request, to build their institutional and technical capacity, both pre- and post-2020,

Also recognizing that flexibility for those developing country Parties that need it in the light of their capacities is reflected in the modalities, procedures and guidelines for the transparency of action and support,

1. *Adopts*, pursuant to Article 13, paragraph 13, of the Paris Agreement, the modalities, procedures and guidelines for the transparency framework for action and support (hereinafter referred to as the modalities, procedures and guidelines) contained in the annex;

2. *Requests* the Subsidiary Body for Scientific and Technological Advice to undertake the first review and update, as appropriate, of the modalities, procedures and guidelines no later than 2028 on the basis of experience in reporting, technical expert review and facilitative, multilateral consideration of progress, and *decides* that subsequent reviews and updates will be undertaken as and when the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement determines them to be appropriate;

3. *Decides* that Parties shall submit their first biennial transparency report and national inventory report, if submitted as a stand-alone report, in accordance with the modalities, procedures and guidelines, at the latest by 31 December 2024;

4. *Also decides* that the least developed country Parties and small island developing States may submit the information referred to in Article 13, paragraphs 7, 8, 9 and 10, of the Paris Agreement at their discretion;

5. *Invites* Parties and, as appropriate, intergovernmental organizations to nominate technical experts with the relevant qualifications to the UNFCCC roster of experts as referred to in chapter VII.I of the annex;

6. *Requests* the secretariat, in addition to the actions specified in the modalities, procedures and guidelines, to:

(a) Produce synthesis reports on Parties' biennial transparency reports and national inventory reports;

(b) Produce an annual report on the technical expert review;

(c) Publish Parties' biennial transparency reports and national inventory reports, if submitted as a stand-alone report, the technical expert review reports, and the records of Parties' facilitative, multilateral consideration of progress on the UNFCCC website;

7. *Recalls* that, in accordance with Article 13, paragraphs 14 and 15, of the Paris Agreement, support shall be provided to developing country Parties for the implementation of Article 13 and for the building of transparency-related capacity of developing country Parties on a continuous basis;

8. *Urges* and *requests* the Global Environment Facility, as an operating entity of the Financial Mechanism, throughout its replenishment cycles, to support developing country Parties in preparing their first and subsequent biennial transparency reports;

9. *Encourages* the Global Environment Facility to consider options for improving the efficiency of the process for providing support for reporting under Article 13 of the Paris Agreement, in particular for addressing the challenges in the application process, including by potentially providing an avenue for Parties to apply for funding for more than one report through the same application in each replenishment period;

10. *Urges* the Global Environment Facility and its implementing and executing agencies and *encourages* the Global Environment Facility Council to consider options for improving the efficiency of the process for providing support for reporting under Article 13 of the Paris Agreement, including through better streamlining of the processes related to applications, implementation plans and signing of grant agreements;

11. *Requests* the Global Environment Facility to continue to support the operation of the Capacity-building Initiative for Transparency as a priority reporting-related need;

12. *Also requests* the Subsidiary Body for Scientific and Technological Advice to develop, pursuant to the modalities, procedures and guidelines, for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its third session (November 2020):

(a) Common reporting tables for the electronic reporting of the information referred to in chapter II, and common tabular formats for the electronic reporting of the information referred to in chapters III, V and VI, of the annex, taking into account the existing common tabular formats and common reporting formats;

(b) Outlines of the biennial transparency report, national inventory document and technical expert review report, pursuant to the modalities, procedures and guidelines contained in the annex;

(c) A training programme for technical experts participating in the technical expert review;

13. *Invites* Parties to submit their views on the work referred to in paragraph 12 above via the submission portal[1] by 31 March 2019;

14. *Notes* decision 1/CP.24, paragraphs 45 and 46, in which the Conference of the Parties decided that the technical annex referred to in decision 14/CP.19, paragraph 7, containing modalities for measuring, reporting and verifying the activities referred to in decision 1/CP.16, paragraph 70, shall be submitted as an annex to the biennial transparency report to be submitted by Parties under Article 13 of the Paris Agreement, and that the technical analysis referred to in decision 14/CP.19, paragraph 11, shall be carried out concurrently with the technical expert review under Article 13 of the Paris Agreement;

15. *Decides* that, subject to the extension of its term by the Conference of the Parties, as referred to in decision 11/CP.24, paragraph 1, the Consultative Group of Experts referred to therein shall also serve the Paris Agreement, starting from 1 January 2019, to support the implementation of the enhanced transparency framework under Article 13 of the Paris Agreement by, inter alia:

(a) Facilitating the provision of technical advice and support to developing country Parties, as applicable, including for the preparation and submission of their biennial transparency reports and facilitating improved reporting over time;

(b) Providing technical advice to the secretariat on the implementation of the training of the technical expert review teams referred to in paragraph 12(c) above;

16. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

[1] https://unfccc.int/submissions_and_statements.

Annex

Modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement

I. Introduction

A. Purpose

1. In accordance with Article 13, paragraph 5, of the Paris Agreement, the purpose of the framework for transparency of action is to provide a clear understanding of climate change action in the light of the objective of the Convention as set out in its Article 2, including clarity and tracking of progress towards achieving Parties' individual nationally determined contributions (NDCs) under Article 4, and Parties' adaptation actions under Article 7, including good practices, priorities, needs and gaps, to inform the global stocktake under Article 14.

2. In accordance with Article 13, paragraph 6, of the Paris Agreement, the purpose of the framework for transparency of support is to provide clarity on support provided and received by relevant individual Parties in the context of climate change actions under Articles 4, 7, 9, 10 and 11, and, to the extent possible, to provide a full overview of aggregate financial support provided, to inform the global stocktake under Article 14.

B. Guiding principles

3. The guiding principles of these modalities, procedures and guidelines (MPGs) are:

(a) Building on and enhancing the transparency arrangements under the Convention, recognizing the special circumstances of the least developed countries (LDCs) and small island developing States (SIDS), and implementing the transparency framework in a facilitative, non-intrusive, non-punitive manner, respecting national sovereignty and avoiding placing undue burden on Parties;

(b) The importance of facilitating improved reporting and transparency over time;

(c) Providing flexibility to those developing country Parties that need it in the light of their capacities;

(d) Promoting transparency, accuracy, completeness, consistency and comparability;

(e) Avoiding duplication of work and undue burden on Parties and the secretariat;

(f) Ensuring that Parties maintain at least the frequency and quality of reporting in accordance with their respective obligations under the Convention;

(g) Ensuring that double counting is avoided;

(h) Ensuring environmental integrity.

C. Flexibility to those developing country Parties that need it in the light of their capacities

4. In accordance with Article 13, paragraph 2, of the Paris Agreement, the enhanced transparency framework shall provide flexibility in the implementation of the provisions of Article 13 to those developing country Parties that need it in the light of their capacities, and these MPGs shall reflect such flexibility.

5. These MPGs specify the flexibility that is available to those developing country Parties that need it in the light of their capacities pursuant to Article 13, paragraph 2, reflecting flexibility, including in the scope, frequency and level of detail of reporting, and in the scope of the review, as referred to decision 1/CP.21, paragraph 89.

6. The application of a flexibility provided for in the provisions of these MPGs for those developing country Parties that need it in the light of their capacities is to be self-determined. The developing country Party shall clearly indicate the provision to which flexibility is applied, concisely clarify capacity constraints, noting that some constraints may be relevant to several provisions, and provide self-determined estimated time frames for improvements in relation to those capacity constraints. When a developing country Party applies flexibility provided for in these MPGs, the technical expert review teams shall not review the Party's determination to apply such flexibility or whether the Party possesses the capacity to implement that specific provision without flexibility.

D. Facilitating improved reporting and transparency over time

7. To facilitate continuous improvement, each Party should, to the extent possible, identify, regularly update and include as part of its biennial transparency report information on areas of improvement in relation to its reporting pursuant to chapters II, III, IV, V and VI of these MPGs, including, as applicable:

(a) Areas of improvement identified by the Party and the technical expert review team in relation to the Party's implementation of Article 13 of the Paris Agreement;

(b) How the Party is addressing or intends to address areas of improvement as referred to in paragraph 7(a) above, as appropriate;

(c) Those developing country Parties that need flexibility in the light of their capacities are encouraged to highlight the areas of improvement that are related to the flexibility provisions used;

(d) Identification of reporting-related capacity-building support needs, including those referred to in paragraph 6 above, and any progress made, including those previously identified as part of the technical expert review referred to in chapter VII below.

8. Parties' domestic plans and priorities with regard to improved reporting reported pursuant to paragraph 7 above are not subject to technical expert review, but the information may inform discussions on areas of improvement and identification of capacity-building needs between the technical expert review team and the Party concerned.

9. In accordance with Article 13, paragraphs 14 and 15, of the Paris Agreement, support shall be provided to developing country Parties for the implementation of Article 13 of the Paris Agreement and for the building of transparency-related capacity of developing country Parties on a continuous basis.

E. Reporting format

10. In the biennial transparency report:

(a) Each Party shall provide a national inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases (GHGs), in accordance with the MPGs contained in chapter II below;

(b) Each Party shall provide the information necessary to track progress in implementing and achieving its NDC under Article 4 of the Paris Agreement, in accordance with the MPGs contained in chapter III below;

(c) Each Party should provide information on climate change impacts and adaptation under Article 7 of the Paris Agreement, in accordance with the MPGs contained in chapter IV below;

(d) Developed country Parties shall provide information pursuant to Article 13, paragraph 9, in accordance with the MPGs contained in chapter V below. Other Parties that provide support should provide such information and, in doing so, are encouraged to use the MPGs contained in chapter V below;

(e) Developing country Parties should provide information on financial, technology transfer and capacity-building support needed and received under Articles 9, 10 and 11 of the Paris Agreement, in accordance with the MPGs contained in chapter VI below.

11. The LDCs and SIDS may submit the information referred to in paragraph 10 above at their discretion.

12. Notwithstanding paragraph 10 above, the national inventory report referred to in paragraph 10 above may be submitted as a stand-alone report or as a component of a biennial transparency report.

13. If a Party submits an adaptation communication as a component of or in conjunction with a biennial transparency report, it should clearly identify which part of the report is the adaptation communication.

14. When reporting information related to climate change impacts and adaptation under Article 7 of the Paris Agreement as referred to in paragraph 10(c) above, a Party may cross-reference previously reported information and focus its reporting on updates to previously reported information.

15. Each Party shall transmit its biennial transparency report, and national inventory report if submitted as a stand-alone report, via an online portal maintained by the secretariat. The secretariat shall post the reports on the UNFCCC website.

16. Each Party shall submit the reports referred to in paragraphs 10 and 12 above in one of the official languages of the United Nations.

II. National inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases

A. Definitions

17. The definitions of the GHG inventory principles used shall be as provided in the Intergovernmental Panel on Climate Change (IPCC) *2006 IPCC Guidelines for National Greenhouse Gas Inventories* (hereinafter referred to as the 2006 IPCC Guidelines), volume 1, chapter 1, section 1.4.

B. National circumstances and institutional arrangements

18. Each Party should implement and maintain national inventory arrangements, including institutional, legal and procedural arrangements for the continued estimation, compilation and timely reporting of national inventory reports in accordance with these MPGs. National inventory arrangements can vary by Party depending on their national circumstances and preferences, and change over time.

19. Each Party shall report on the following functions related to inventory planning, preparation and management:

(a) Its national entity or national focal point with overall responsibility for the national inventory;

(b) Its inventory preparation process, including division of specific responsibilities of institutions participating in the inventory preparation to ensure that sufficient activity data collection, choice and development of methods, emission factors and other parameters are in accordance with the IPCC guidelines referred to in paragraph 20 below and these MPGs;

(c) Its archiving of all information for the reported time series, including all disaggregated emission factors and activity data, all documentation about generating and aggregating data, including quality assurance/quality control (QA/QC), review results and planned inventory improvements;

(d) Its processes for the official consideration and approval of the inventory.

C. Methods

1. Methodologies, parameters and data

20. Each Party shall use the 2006 IPCC Guidelines, and shall use any subsequent version or refinement of the IPCC guidelines agreed upon by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA). Each Party is encouraged to use the *2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands*.

21. Each Party shall use methods from the IPCC guidelines referred to in paragraph 20 above. Each Party should make every effort to use a recommended method (tier level) for key categories in accordance with those IPCC guidelines.

22. Each Party may use nationally appropriate methodologies if they better reflect its national circumstances and are consistent with the IPCC guidelines referred to in paragraph 20 above. In these cases, each Party shall transparently explain national methods, data and/or parameters selected.

23. A Party may be unable to adopt a higher tier method for a particular key category owing to lack of resources. In such cases, the Party may use a tier 1 approach, and shall clearly document why the methodological choice was not in line with the corresponding decision tree of the IPCC guidelines referred to in paragraph 20 above. The Party should prioritize for future improvement any key categories for which the good practice method elaborated in the IPCC guidelines referred to in paragraph 20 above cannot be used.

24. Each Party is encouraged to use country-specific and regional emission factors and activity data, where available, or to propose plans to develop them, in accordance with the good practice elaborated in the IPCC guidelines referred to in paragraph 20 above.

2. Key category analysis

25. Each Party shall identify key categories for the starting year and the latest reporting year referred to in chapter II.E.3 below, including and excluding land use, land-use change and forestry (LULUCF) categories, using approach 1, for both level and trend assessment, by implementing a key category analysis consistent with the IPCC guidelines referred to in paragraph 20 above; those developing country Parties that need flexibility in the light of their capacities with respect to this provision have the flexibility to instead identify key categories using a threshold no lower than 85 per cent in place of the 95 per cent threshold defined in the IPCC guidelines referred to in paragraph 20 above, allowing a focus on improving fewer categories and prioritizing resources.

3. Time-series consistency and recalculations

26. To ensure time-series consistency, each Party should use the same methods and a consistent approach to underlying activity data and emission factors for each reported year.

27. Each Party should use surrogate data, extrapolation, interpolation and other methods consistent with splicing techniques contained in the IPCC guidelines referred to in paragraph 20 above to estimate missing emission values resulting from lack of activity data, emission factors or other parameters in order to ensure a consistent time series.

28. Each Party shall perform recalculations in accordance with the IPCC guidelines referred to in paragraph 20 above, ensuring that changes in emission trends are not introduced as a result of changes in methods or assumptions across the time series.

4. Uncertainty assessment

29. Each Party shall quantitatively estimate and qualitatively discuss the uncertainty of the emission and removal estimates for all source and sink categories, including inventory totals, for at least the starting year and the latest reporting year of the inventory time series referred to in paragraphs 57 and 58 below. Each Party shall also estimate the trend uncertainty of emission and removal estimates for all source and sink categories, including totals, between the starting year and the latest reporting year of the inventory time series referred to in paragraphs 57 and 58 below, using at least approach 1, as provided in the IPCC guidelines referred to in paragraph 20 above; those developing country Parties that need flexibility in the light of their capacities with respect to this provision have the flexibility to instead provide, at a minimum, a qualitative discussion of uncertainty for key categories, using the IPCC guidelines referred to in paragraph 20 above, where quantitative input data are unavailable to quantitatively estimate uncertainties, and are encouraged to provide a quantitative estimate of uncertainty for all source and sink categories of the GHG inventory.

5. Assessment of completeness

30. Each Party should indicate the sources and sinks (categories, pools and gases) that are not considered in the national inventory report but for which estimation methods are included in the IPCC guidelines referred to in paragraph 20 above and explain the reasons for such exclusion.

31. Each Party shall use notation keys where numerical data are not available when completing common reporting tables, indicating the reasons why emissions from sources and removals by sinks and associated data for specific sectors, categories and subcategories or gases are not reported. These notation keys include:

(a) "NO" (not occurring) for categories or processes, including recovery, under a particular source or sink category that do not occur within a Party;

(b) "NE" (not estimated) for activity data and/or emissions by sources and removals by sinks of GHGs that have not been estimated but for which a corresponding activity may occur within a Party;

(c) "NA" (not applicable) for activities under a given source/sink category that do occur within the Party but do not result in emissions or removals of a specific gas;

(d) "IE" (included elsewhere) for emissions by sources and removals by sinks of GHGs estimated but included elsewhere in the inventory instead of under the expected source/sink category;

(e) "C" (confidential) for emissions by sources and removals by sinks of GHGs where the reporting would involve the disclosure of confidential information.

32. Each Party may use the notation key "NE" (not estimated) when the estimates would be insignificant in terms of level according to the following considerations: emissions from a category should only be considered insignificant if the likely level of emissions is below 0.05 per cent of the national total GHG emissions, excluding LULUCF, or 500 kilotonnes of carbon dioxide equivalent (kt CO_2 eq), whichever is lower. The total national aggregate of estimated emissions for all gases from categories considered insignificant shall remain below 0.1 per cent of the national total GHG emissions, excluding LULUCF. Parties should use approximated activity data and default IPCC emission factors to derive a likely level of emissions for the respective category. Those developing country Parties that need flexibility in the light of their capacities with respect to this provision have the flexibility to instead consider emissions insignificant if the likely level of emissions is below 0.1 per cent of the national total GHG emissions, excluding LULUCF, or 1,000 kt CO_2 eq, whichever is lower. The total national aggregate of estimated emissions for all gases from categories considered insignificant, in this case, shall remain below 0.2 per cent of the national total GHG emissions, excluding LULUCF.

33. Once emissions or removals have been estimated for a category and if they continue to occur, each Party shall report them in subsequent submissions.

6. Quality assurance/quality control

34. Each Party shall elaborate an inventory QA/QC plan in accordance with the IPCC guidelines referred to in paragraph 20 above, including information on the inventory agency responsible for implementing QA/QC; those developing country Parties that need flexibility in the light of their capacities with respect to this provision are instead encouraged to elaborate an inventory QA/QC plan in accordance with the IPCC guidelines referred to in paragraph 20 above, including information on the inventory agency responsible for implementing QA/QC.

35. Each Party shall implement and provide information on general inventory QC procedures in accordance with its QA/QC plan and the IPCC guidelines referred to in paragraph 20 above; those developing country Parties that need flexibility in the light of their capacities with respect to this provision are instead encouraged to implement and provide information on general inventory QC procedures in accordance with its QA/QC plan and the IPCC guidelines referred to in paragraph 20 above. In addition, Parties should apply category-specific QC procedures in accordance with the IPCC guidelines referred to in paragraph 20 above for key categories and for those individual categories in which significant methodological changes and/or data revisions have occurred. In addition, Parties should implement QA procedures by conducting a basic expert peer review of their inventories in accordance with the IPCC guidelines referred to in paragraph 20 above.

36. Each Party should compare the national estimates of CO_2 emissions from fuel combustion with those obtained using the reference approach, as contained in the IPCC guidelines referred to in paragraph 20 above, and report the results of this comparison in its national inventory report.

D. Metrics

37. Each Party shall use the 100-year time-horizon global warming potential (GWP) values from the IPCC Fifth Assessment Report, or 100-year time-horizon GWP values from a subsequent IPCC assessment report as agreed upon by the CMA, to report aggregate emissions and removals of GHGs, expressed in CO_2 eq. Each Party may in addition also use other metrics (e.g. global temperature potential) to report supplemental information on aggregate emissions and removals of GHGs, expressed in CO_2 eq. In such cases, the Party shall provide in the national inventory document information on the values of the metrics used and the IPCC assessment report they were sourced from.

E. Reporting guidance

38. Pursuant to Article 13, paragraph 7(a), of the Paris Agreement, each Party shall provide a national inventory report of anthropogenic emissions by sources and removals by sinks of GHGs. The national inventory report consists of a national inventory document and the common reporting tables. Each Party shall report the information referred to in paragraphs 39–46 below, recognizing the associated flexibilities provided for those developing country Parties that need them in the light of their capacities.

1. Information on methods and cross-cutting elements

39. Each Party shall report methods used, including the rationale for the choice of methods, in accordance with good practice elaborated in the IPCC guidelines referred to paragraph 20 above, and the descriptions, assumptions, references and sources of information used for the emission factors and activity data used to compile the GHG inventory.

40. Each Party shall provide information on the category and gas, and the methodologies, emission factors and activity data used at the most disaggregated level, to the extent possible, according to the IPCC guidelines referred to in paragraph 20 above, including related data references for reported emission and removal estimates for any country-specific category and gas that is not included in the IPCC guidelines referred to in paragraph 20 above.

41. Each Party shall describe the key categories, including information on the approach used for their identification, and information on the level of disaggregation used, in accordance with paragraph 25 above.

42. Each Party shall report the individual and cumulative percentage contributions from key categories, for both level and trend, consistent with the IPCC guidelines referred to in paragraph 20 above and the provisions referred to in paragraph 25 above.

43. Each Party shall report recalculations for the starting year referred to in paragraphs 57 and 58 below and all subsequent years of the inventory time series, together with explanatory information and justifications for recalculations with an indication of relevant changes and their impact on the emission trends, in accordance with paragraphs 26–28 above.

44. Each Party shall report the results of the uncertainty analysis as well as methods used, underlying assumptions, as applicable, and trends, at least for the starting year and the latest reporting year of the inventory time series referred to in paragraphs 57 and 58 below, in accordance with paragraph 29 above.

45. Each Party shall report information on the reasons for lack of completeness, including information on any methodological or data gaps, in accordance with paragraphs 30–33 above.

46. Each Party shall report the QA/QC plan and information on QA/QC procedures already implemented or to be implemented in the future, in accordance with paragraphs 34−36 above.

2. Sectors and gases

47. Each Party shall report estimates of emissions and removals for all categories, gases and carbon pools considered in the GHG inventory throughout the reported period on a gas-by-gas basis in units of mass at the most disaggregated level, in accordance with the IPCC guidelines referred to in paragraph 20 above, using the common reporting tables, including a descriptive summary and figures underlying emission trends, with emissions by sources listed separately from removals by sinks, except in cases where it may be technically impossible to separate information on emissions and removals in the LULUCF sector, and noting that a minimum level of aggregation is needed to protect confidential business and military information.

48. Each Party shall report seven gases (CO_2, methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6) and nitrogen trifluoride (NF_3)); those developing country Parties that need flexibility in the light of their capacities with respect to this provision have the flexibility to instead report at least three gases (CO_2, CH_4 and N_2O) as well as any of the additional four gases (HFCs, PFCs, SF_6 and NF_3) that are included in the Party's NDC under Article 4 of the Paris Agreement, are covered by an activity under Article 6 of the Paris Agreement, or have been previously reported.

49. Each Party reporting HFCs, PFCs, SF_6 and NF_3 shall report actual emissions of the gases, providing disaggregated data by chemical (e.g. HFC-134a) and category in units of mass and in CO_2 eq.

50. Each Party shall report the following sectors: energy, industrial processes and product use, agriculture, LULUCF and waste, according to the IPCC guidelines referred to in paragraph 20 above.

51. Each Party should provide information on the following precursor gases: carbon monoxide (CO), nitrogen oxides and non-methane volatile organic compounds (NMVOCs), as well as sulfur oxides.

52. Each Party may report indirect CO_2 from the atmospheric oxidation of CH_4, CO and NMVOCs. For Parties that decide to report indirect CO_2, the national totals shall be presented with and without indirect CO_2. Each Party should report indirect N_2O emissions from sources other than those in the agriculture and LULUCF sectors as a memo item. Those estimates of indirect N_2O shall not be included in national totals. Parties may provide information on other substances that have an impact on climate.

53. Each Party should report international aviation and marine bunker fuel emissions as two separate entries and should not include such emissions in national totals but report them distinctly, if disaggregated data are available, making every effort to both apply and report according to the method contained in the IPCC guidelines referred to in paragraph 20 above for separating domestic and international emissions.

54. Each Party should clearly indicate how feedstocks and non-energy use of fuels have been accounted for in the inventory, under the energy or industrial processes sector, in accordance with the IPCC guidelines referred to in paragraph 20 above.

55. In the case of a Party addressing the emissions and subsequent removals from natural disturbances on managed lands in its national GHG inventory, that Party shall report information on the approach taken, and how it is consistent with IPCC guidance, as appropriate, and shall indicate if the estimates are indicated in national totals.

56. In the case of a Party using an approach to reporting emissions and removals from harvested wood products in accordance with IPCC guidance other than the production approach, that Party shall also provide supplementary information on emissions and removals from harvested wood products estimated using the production approach.

3. Time series

57. Each Party shall report a consistent annual time series starting from 1990; those developing country Parties that need flexibility in the light of their capacities with respect to this provision have the flexibility to instead report data covering, at a minimum, the reference year/period for its NDC under Article 4 of the Paris Agreement and, in addition, a consistent annual time series from at least 2020 onwards.

58. For each Party, the latest reporting year shall be no more than two years prior to the submission of its national inventory report; those developing country Parties that need flexibility in the light of their capacities with respect to this provision have the flexibility to instead have their latest reporting year as three years prior to the submission of their national inventory report.

III. Information necessary to track progress made in implementing and achieving nationally determined contributions under Article 4 of the Paris Agreement

A. National circumstances and institutional arrangements

59. Each Party shall describe its national circumstances relevant to progress made in implementing and achieving its NDC under Article 4 of the Paris Agreement, including:

(a) Government structure;

(b) Population profile;

(c) Geographical profile;

(d) Economic profile;

(e) Climate profile;

(f) Sector details.

60. Each Party shall provide information on how its national circumstances affect GHG emissions and removals over time.

61. Each Party shall provide information on the institutional arrangements in place to track progress made in implementing and achieving its NDC under Article 4, including those used for tracking internationally transferred mitigation outcomes, if applicable, along with any changes in institutional arrangements since its most recent biennial transparency report.

62. Each Party shall provide information on legal, institutional, administrative and procedural arrangements for domestic implementation, monitoring, reporting, archiving of information and stakeholder engagement related to the implementation and achievement of its NDC under Article 4.

63. In reporting the information referred to in paragraphs 59–62 above, a Party may reference previously reported information.

B. Description of a Party's nationally determined contribution under Article 4 of the Paris Agreement, including updates

64. Each Party shall provide a description of its NDC under Article 4, against which progress will be tracked. The information provided shall include the following, as applicable, including any updates to information previously provided:

(a) Target(s) and description, including target type(s) (e.g. economy-wide absolute emission reduction, emission intensity reduction, emission reduction below a projected baseline, mitigation co-benefits of adaptation actions or economic diversification plans, policies and measures, and other);

(b) Target year(s) or period(s), and whether they are single-year or multi-year target(s);

(c) Reference point(s), level(s), baseline(s), base year(s) or starting point(s), and their respective value(s);

(d) Time frame(s) and/or periods for implementation;

(e) Scope and coverage, including, as relevant, sectors, categories, activities, sources and sinks, pools and gases;

(f) Intention to use cooperative approaches that involve the use of internationally transferred mitigation outcomes under Article 6 towards NDCs under Article 4 of the Paris Agreement;

(g) Any updates or clarifications of previously reported information (e.g. recalculation of previously reported inventory data, or greater detail on methodologies or use of cooperative approaches).

C. Information necessary to track progress made in implementing and achieving its nationally determined contribution under Article 4 of the Paris Agreement

65. Each Party shall identify the indicator(s) that it has selected to track progress towards the implementation and achievement of its NDC under Article 4. Indicators shall be relevant to a Party's NDC under Article 4, and may be either qualitative or quantitative.

66. These indicators could include, as appropriate, for example: net GHG emissions and removals, percentage reduction of GHG intensity, relevant qualitative indicators for a specific policy or measure, mitigation co-benefits of adaptation actions and/or economic diversification plans or other (e.g. hectares of reforestation, percentage of renewable energy use or production, carbon neutrality, share of non-fossil fuel in primary energy consumption and non-GHG related indicators).

67. Each Party shall provide the information for each selected indicator for the reference point(s), level(s), baseline(s), base year(s) or starting point(s), and shall update the information in accordance with any recalculation of the GHG inventory, as appropriate.

68. Each Party shall provide the most recent information for each selected indicator identified in paragraph 65 above for each reporting year during the implementation period of its NDC under Article 4.

69. Each Party shall compare the most recent information for each selected indicator with the information provided pursuant to paragraph 67 above to track progress made in implementing its NDC under Article 4.

70. For the first biennial transparency report that contains information on the end year or end of the period of its NDC under Article 4, each Party shall provide an assessment of whether it has achieved the target(s) for its NDC under Article 4 based on the relevant information described in paragraphs 59–69 above and paragraph 78 below, as applicable, and the most recent information for each selected indicator relevant to tracking progress towards the implementation and achievement of its NDC under Article 4.

71. For the first NDC under Article 4, each Party shall clearly indicate and report its accounting approach, including how it is consistent with Article 4, paragraphs 13 and 14, of the Paris Agreement. Each Party may choose to provide information on accounting of its first NDC consistent with decision 4/CMA.1.

72. For the second and subsequent NDC under Article 4, each Party shall provide information referred to in chapter III.B and C above consistent with decision 4/CMA.1. Each Party shall clearly indicate how its reporting is consistent with decision 4/CMA.1.

73. Each Party shall provide any definitions needed to understand its NDC under Article 4, including those related to each indicator identified in paragraph 65 above, those related to any sectors or categories defined differently than in the national inventory report, or the mitigation co-benefits of adaptation actions and/or economic diversification plans.

74. Each Party shall provide a description of each methodology and/or accounting approach used, as applicable for:

(a) Target(s), as described in paragraph 64 above;

(b) The construction of baselines, as described in paragraph 64 above, to the extent possible;

(c) Each indicator identified in paragraph 65 above.

75. The information referred to in paragraph 74 above shall include, as applicable and available to the Party's NDC under Article 4:

(a) Key parameters, assumptions, definitions, data sources and models used;

(b) IPCC guidelines used;

(c) Metrics used;

(d) Where applicable to its NDC, any sector-, category- or activity-specific assumptions, methodologies and approaches consistent with IPCC guidance, taking into account any relevant decision under the Convention, including as applicable:

(i) The approach used to address emissions and subsequent removals from natural disturbances on managed lands;

(ii) The approach used to account for emissions and removals from harvested wood products;

(iii) The approach used to address the effects of age-class structure in forests;

(e) Methodologies used to estimate mitigation co-benefits of adaptation actions and/or economic diversification plans;

(f) Methodologies associated with any cooperative approaches that involve the use of internationally transferred mitigation outcomes towards its NDC under Article 4, consistent with CMA guidance on cooperative approaches under Article 6;

(g) Methodologies used to track progress arising from the implementation of policies and measures;

(h) Any other methodologies related to its NDC under Article 4;

(i) Any conditions and assumptions relevant to the achievement of its NDC under Article 4.

76. Each Party shall also:

(a) Describe, for each indicator identified in paragraph 65 above, how it is related to its NDC under Article 4;

(b) Explain how the methodology in each reporting year is consistent with the methodology or methodologies used when communicating the NDC;

(c) Explain methodological inconsistencies with its most recent national inventory report, if applicable;

(d) Describe how double counting of net GHG emission reductions has been avoided, including in accordance with guidance developed in relation to Article 6, if relevant.

77. Each Party shall provide the information referred to in paragraphs 65–76 above in a structured summary to track progress made in implementing and achieving its NDC under Article 4, including:

(a) For each selected indicator:

(i) Information for the reference point(s), level(s), baseline(s), base year(s), or starting point(s) referred to in paragraph 67 above;

(ii) Information for previous reporting years during the implementation period of its NDC under Article 4, identified in paragraph 68 above, as applicable;

(iii) The most recent information identified in paragraph 68 above;

(b) Where applicable, information on GHG emissions and removals consistent with the coverage of its NDC under Article 4;

(c) Contribution from the LULUCF sector for each year of the target period or target year, if not included in the inventory time series of total net GHG emissions and removals, as applicable;

(d) Each Party that participates in cooperative approaches that involve the use of internationally transferred mitigation outcomes towards an NDC under Article 4, or authorizes the use of mitigation outcomes for international mitigation purposes other than achievement of its NDC, shall also provide the following information in the structured summary consistently with relevant decisions adopted by the CMA on Article 6:

(i) The annual level of anthropogenic emissions by sources and removals by sinks covered by the NDC on an annual basis reported biennially;

(ii) An emissions balance reflecting the level of anthropogenic emissions by sources and removals by sinks covered by its NDC adjusted on the basis of corresponding adjustments undertaken by effecting an addition for internationally transferred mitigation outcomes first-transferred/transferred and a subtraction for internationally transferred mitigation outcomes used/acquired, consistent with decisions adopted by the CMA on Article 6;

(iii) Any other information consistent with decisions adopted by the CMA on reporting under Article 6;

(iv) Information on how each cooperative approach promotes sustainable development; and ensures environmental integrity and transparency, including in governance; and applies robust accounting to ensure inter alia the avoidance of double counting, consistent with decisions adopted by the CMA on Article 6.

78. Each Party with an NDC under Article 4 that consists of adaptation actions and/or economic diversification plans resulting in mitigation co-benefits consistent with Article 4, paragraph 7, of the Paris Agreement shall provide the information necessary to track progress on the implementation and achievement of the domestic policies and measures implemented to address the social and economic consequences of response measures, including:

(a) Sectors and activities associated with the response measures;

(b) Social and economic consequences of the response measures;

(c) Challenges in and barriers to addressing the consequences;

(d) Actions to address the consequences.

79. Each Party shall report the information referred to in paragraphs 65–78 above in a narrative and common tabular format, as applicable. Such common tabular formats should accommodate all types of NDC under Article 4, as appropriate.

D. Mitigation policies and measures, actions and plans, including those with mitigation co-benefits resulting from adaptation actions and economic diversification plans, related to implementing and achieving a nationally determined contribution under Article 4 of the Paris Agreement

80. Each Party shall provide information on actions, policies and measures that support the implementation and achievement of its NDC under Article 4 of the Paris Agreement, focusing on those that have the most significant impact on GHG emissions or removals and those impacting key categories in the national GHG inventory. This information shall be presented in narrative and tabular format.

81. To the extent possible, Parties shall organize the reporting of actions by sector (energy, transport, industrial processes and product use, agriculture, LULUCF, waste management and other).

82. Each Party shall provide the following information on its actions, policies and measures, to the extent possible, in a tabular format:

(a) Name;

(b) Description;

(c) Objectives;

(d) Type of instrument (regulatory, economic instrument or other);

(e) Status (planned, adopted or implemented);

(f) Sector(s) affected (energy, transport, industrial processes and product use, agriculture, LULUCF, waste management or other);

(g) Gases affected;

(h) Start year of implementation;

(i) Implementing entity or entities.

83. Each Party may also provide the following information for each action, policy and measure reported:

(a) Costs;

(b) Non-GHG mitigation benefits;

(c) How the mitigation actions as identified in paragraph 80 above interact with each other, as appropriate.

84. For each Party with an NDC under Article 4 of the Paris Agreement that consists of mitigation co-benefits resulting from Parties' adaptation actions and/or economic diversification plans consistent with Article 4, paragraph 7, information to be reported under paragraphs 80, 82 and 83 above includes relevant information on policies and measures contributing to mitigation co-benefits resulting from adaptation actions or economic diversification plans.

85. Each Party shall provide, to the extent possible, estimates of expected and achieved GHG emission reductions for its actions, policies and measures in the tabular format referred to in paragraph 82 above; those developing country Parties that need flexibility in the light

of their capacities with respect to this provision are instead encouraged to report this information.

86. Each Party shall describe the methodologies and assumptions used to estimate the GHG emission reductions or removals due to each action, policy and measure, to the extent available. This information may be presented in an annex to its biennial transparency report.

87. Each Party should identify those actions, policies and measures that are no longer in place compared with the most recent biennial transparency report, and explain why they are no longer in place.

88. Each Party should identify its actions, policies and measures that influence GHG emissions from international transport.

89. Each Party should, to the extent possible, provide information about how its actions, policies and measures are modifying longer-term trends in GHG emissions and removals.

90. Each Party is encouraged to provide detailed information, to the extent possible, on the assessment of economic and social impacts of response measures.

E. Summary of greenhouse gas emissions and removals

91. Each Party that submits a stand-alone national inventory report shall provide a summary of its GHG emissions and removals. This information shall be provided for those reporting years corresponding to the Party's most recent national inventory report, in a tabular format.

F. Projections of greenhouse gas emissions and removals, as applicable

92. Each Party shall report projections pursuant to paragraphs 93–101 below; those developing country Parties that need flexibility in the light of their capacities are instead encouraged to report these projections.

93. Projections are indicative of the impact of mitigation policies and measures on future trends in GHG emissions and removals, and shall not be used to assess progress towards the implementation and achievement of a Party's NDC under Article 4 of the Paris Agreement unless the Party has identified a reported projection as its baseline as identified in chapter III.B above.

94. Each Party that reports pursuant to paragraph 92 above shall report a 'with measures' projection of all GHG emissions and removals and may report a 'with additional measures' projection and a 'without measures' projection.[1]

95. Projections shall begin from the most recent year in the Party's national inventory report and extend at least 15 years beyond the next year ending in zero or five; those developing country Parties that need flexibility in the light of their capacities with respect to this provision have the flexibility to instead extend their projections at least to the end point of their NDC under Article 4 of the Paris Agreement.

96. Each Party should provide information in describing the methodology used to develop the projections. This information should include:

(a) Models and/or approaches used and key underlying assumptions and parameters used for projections (e.g. gross domestic product growth rate/level, population growth rate/level);

[1] A 'with measures' scenario encompasses currently implemented and adopted policies and measures. If provided, a 'with additional measures' scenario encompasses implemented, adopted and planned policies and measures. If provided, a 'without measures' projection excludes all policies and measures implemented, adopted and planned after the year chosen as the starting points for the projection.

(b) Changes in the methodology since the Party's most recent biennial transparency report;

(c) Assumptions on policies and measures included in the 'with measures' projections and 'with additional measures' projections, if included;

(d) Sensitivity analysis for any of the projections, together with a brief explanation of the methodologies and parameters used.

97. Each Party shall also provide projections of key indicators to determine progress towards its NDC under Article 4 of the Paris Agreement.

98. Each Party shall include projections on a sectoral basis and by gas, as well as for the national total, using a common metric consistent with that in its national inventory report.

99. Projections shall be presented relative to actual inventory data for the preceding years.

100. Emission projections shall be provided with and without LULUCF.

101. Projections shall be presented in graphical and tabular formats.

102. Those developing country Parties that need flexibility in the light of their capacities with respect to paragraphs 93–101 above can instead report using a less detailed methodology or coverage.

G. Other information

103. Each Party may provide any other information relevant to tracking progress made in implementing and achieving its NDC under Article 4 of the Paris Agreement.

IV. Information related to climate change impacts and adaptation under Article 7 of the Paris Agreement

104. Each Party should provide information related to climate change impacts and adaptation under Article 7 of the Paris Agreement, as appropriate. Providing such information is not mandatory.

105. The information referred to below could facilitate, inter alia, recognition of the adaptation efforts of developing country Parties.

A. National circumstances, institutional arrangements and legal frameworks

106. Each Party should provide the following information, as appropriate:

(a) National circumstances relevant to its adaptation actions, including biogeophysical characteristics, demographics, economy, infrastructure and information on adaptive capacity;

(b) Institutional arrangements and governance, including for assessing impacts, addressing climate change at the sectoral level, decision-making, planning, coordination, addressing cross-cutting issues, adjusting priorities and activities, consultation, participation, implementation, data governance, monitoring and evaluation, and reporting;

(c) Legal and policy frameworks and regulations.

B. Impacts, risks and vulnerabilities, as appropriate

107. Each Party should provide the following information, as appropriate:

(a) Current and projected climate trends and hazards;

(b) Observed and potential impacts of climate change, including sectoral, economic, social and/or environmental vulnerabilities;

(c) Approaches, methodologies and tools, and associated uncertainties and challenges, in relation to paragraph 107(a) and (b) above.

C. Adaptation priorities and barriers

108. Each Party should provide the following information, as appropriate:

(a) Domestic priorities and progress towards those priorities;

(b) Adaptation challenges and gaps, and barriers to adaptation.

D. Adaptation strategies, policies, plans, goals and actions to integrate adaptation into national policies and strategies

109. Each Party should provide the following information, as appropriate:

(a) Implementation of adaptation actions in accordance with the global goal on adaptation as set out in Article 7, paragraph 1, of the Paris Agreement;

(b) Adaptation goals, actions, objectives, undertakings, efforts, plans (e.g. national adaptation plans and subnational plans), strategies, policies, priorities (e.g. priority sectors, priority regions or integrated plans for coastal management, water and agriculture), programmes and efforts to build resilience;

(c) How best available science, gender perspectives and indigenous, traditional and local knowledge are integrated into adaptation;

(d) Development priorities related to climate change adaptation and impacts;

(e) Any adaptation actions and/or economic diversification plans leading to mitigation co-benefits;

(f) Efforts to integrate climate change into development efforts, plans, policies and programming, including related capacity-building activities;

(g) Nature-based solutions to climate change adaptation;

(h) Stakeholder involvement, including subnational, community-level and private sector plans, priorities, actions and programmes.

E. Progress on implementation of adaptation

110. Each Party should provide the following information, as appropriate, on progress on:

(a) Implementation of the actions identified in chapter IV.D above;

(b) Steps taken to formulate, implement, publish and update national and regional programmes, strategies and measures, policy frameworks (e.g. national adaptation plans) and other relevant information;

(c) Implementation of adaptation actions identified in current and past adaptation communications, including efforts towards meeting adaptation needs, as appropriate;

(d) Implementation of adaptation actions identified in the adaptation component of NDCs, as applicable;

(e) Coordination activities and changes in regulations, policies and planning.

111. Developing country Parties may also include information on, as appropriate, implementation of supported adaptation actions, and the effectiveness of already implemented adaptation measures.

F. Monitoring and evaluation of adaptation actions and processes

112. In order to enhance their adaptation actions and to facilitate reporting, as appropriate, each Party should report on the establishment or use of domestic systems to monitor and evaluate the implementation of adaptation actions. Parties should report on approaches and systems for monitoring and evaluation, including those in place or under development.

113. Each Party should provide the following information, as appropriate, related to monitoring and evaluation:

(a) Achievements, impacts, resilience, review, effectiveness and results;

(b) Approaches and systems used, and their outputs;

(c) Assessment of and indicators for:

(i) How adaptation increased resilience and reduced impacts;

(ii) When adaptation is not sufficient to avert impacts;

(iii) How effective implemented adaptation measures are;

(d) Implementation, in particular on:

(i) Transparency of planning and implementation;

(ii) How support programmes meet specific vulnerabilities and adaptation needs;

(iii) How adaptation actions influence other development goals;

(iv) Good practices, experience and lessons learned from policy and regulatory changes, actions and coordination mechanisms.

114. Each Party should provide information related to the effectiveness and sustainability of adaptation actions, as appropriate, including on:

(a) Ownership, stakeholder engagement, alignment of adaptation actions with national and subnational policies, and replicability;

(b) The results of adaptation actions and the sustainability of those results.

G. Information related to averting, minimizing and addressing loss and damage associated with climate change impacts

115. Each interested Party may provide, as appropriate, information related to enhancing understanding, action and support, on a cooperative and facilitative basis, to avert, minimize and address loss and damage associated with climate change impacts, taking into account projected changes in climate-related risks, vulnerabilities, adaptive capacities and exposure, including, as appropriate, on:

(a) Observed and potential climate change impacts, including those related to extreme weather events and slow onset events, drawing upon the best available science;

(b) Activities related to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change;

(c) Institutional arrangements to facilitate the implementation of the activities referred to in paragraph 115(b) above.

H. Cooperation, good practices, experience and lessons learned

116. Each Party should provide the following information, as appropriate, related to cooperation, good practices, experience and lessons learned:

(a) Efforts to share information, good practices, experience and lessons learned, including as they relate to:

(i) Science, planning and policies relevant to adaptation;

(ii) Policy innovation and pilot and demonstration projects;

(iii) Integration of adaptation actions into planning at different levels;

(iv) Cooperation to share information and to strengthen science, institutions and adaptation;

(v) Area, scale and types of cooperation and good practices;

(vi) Improving durability and effectiveness of adaptation actions;

(vii) Helping developing countries to identify effective adaptation practices, needs, priorities, and challenges and gaps in a way that is consistent with encouraging good practices;

(b) Strengthening scientific research and knowledge related to:

(i) Climate, including research and systematic observation and early warning systems, to inform climate services and decision-making;

(ii) Vulnerability and adaptation;

(iii) Monitoring and evaluation.

I. Any other information related to climate change impacts and adaptation under Article 7 of the Paris Agreement

117. Each Party may provide, as appropriate, any other information related to climate change impacts and adaptation under Article 7.

V. Information on financial, technology development and transfer and capacity-building support provided and mobilized under Articles 9–11 of the Paris Agreement

118. Developed country Parties shall provide information pursuant to Article 13, paragraph 9, of the Paris Agreement in accordance with the MPGs contained in this chapter. Other Parties that provide support should provide such information and, in doing so, are encouraged to use the MPGs contained in this chapter.

A. National circumstances and institutional arrangements

119. Information on national circumstances and institutional arrangements relevant to reporting on the provision and mobilization of support, including:

(a) Description of the systems and processes used to identify, track and report on support provided and mobilized through public interventions;

(b) Description of challenges and limitations;

(c) Information on experience and good practices in relation to public policy and regulatory frameworks to incentivize further private climate financing and investment;

(d) Efforts taken to enhance comparability and accuracy of information reported on financial support provided and mobilized through public interventions, such as through use of international standards or harmonization with other countries, institutions and international systems.

120. Information, if available, on national circumstances and institutional arrangements for the provision of technology development and transfer and capacity-building support.

B. Underlying assumptions, definitions and methodologies

121. In order to enhance the transparency of reporting, a description of the underlying assumptions, methodologies and definitions, as applicable, used to identify and/or report, including:

(a) The chosen reporting year (calendar year, fiscal year);

(b) The conversion between domestic currency and United States dollars;

(c) The status (committed, disbursed);

(d) The channel (bilateral, regional, multi-bilateral, multilateral);

(e) The funding source (official development assistance (ODA), other official flows (OOF), other);

(f) The financial instrument (e.g. grant, concessional loan, non-concessional loan, equity, guarantee, insurance, other (specify));

(g) Information on instruments and funding sources reported, including how a Party has determined finance to be concessional and/or ODA, including by using information such as grant equivalency, institution and/or instrument-based approaches;

(h) The type of support (e.g. adaptation, mitigation, cross-cutting);

(i) The sector;

(j) The subsector;

(k) Whether it supported capacity-building and/or technology development and transfer objectives;

(l) The support as being climate-specific;

(m) Information on the efforts taken to avoid double counting, including on:

(i) How double counting among multiple Parties involved in the provision of support was avoided;

(ii) How double counting among multiple Parties involved in the mobilization of private finance through public interventions was avoided, including the methodologies and assumptions used to attribute the mobilized resources through public interventions reported to the Party that reports them, if possible relative to the type of instrument used for the mobilization;

(iii) How double counting was avoided between the resources reported as provided or mobilized, and the resources used under Article 6 of the Paris Agreement by the acquiring Party for use towards the achievement of its NDC;

(iv) How support is attributed between multiple recipient countries, in cases where a project involves multiple recipient countries and where this information is reported on a country-by-country basis;

(n) The definition of public and private finance, in particular where entities or funds are mixed;

(o) How private finance was assessed as mobilized through public interventions, including by:

(i) Identifying a clear causal link between a public intervention and mobilized private finance, where the activity would not have moved forward, or moved forward at scale, in the absence of the Party's intervention;

(ii) Providing information on the point of measurement (e.g. point of commitment, point of disbursement) of the private finance mobilized as a result of the public intervention, to the extent possible in relation to the type of instrument or mechanism used for the mobilization;

(iii) Providing information on the boundaries used to identify finance as mobilized by public intervention;

(p) How it seeks to ensure that support provided and mobilized through public interventions effectively addresses the needs and priorities of developing country Parties for the implementation of the Paris Agreement, as identified in country-driven strategies and instruments, such as biennial transparency reports, NDCs and national adaptation plans;

(q) How it seeks to ensure that support provided and mobilized through public interventions is in line with the long-term goals of the Paris Agreement;

(r) An indication of what new and additional financial resources have been provided, and how it has been determined that such resources are new and additional;

(s) How the information provided reflects a progression from previous levels in the provision and mobilization of finance under the Paris Agreement;

(t) Information on reporting on multilateral finance, including:

(i) Whether the multilateral finance reported is based on the Party's inflow contribution to a multilateral institution and/or on the Party's share in the outflow of the multilateral institution;

(ii) Whether and how multilateral finance has been reported as climate-specific and how the climate-specific share was calculated, including by, for example, using existing international standards;

(iii) Whether multilateral finance has been reported as core/general, with the understanding that the actual climate finance amount it would transfer into depends on the programming choices of the multilateral institutions;

(iv) Whether and how multilateral finance has been attributed to the reporting Party.

122. A description of the underlying assumptions, definitions and methodologies used to provide information on technology development and transfer and capacity-building support.

C. Information on financial support provided and mobilized under Article 9 of the Paris Agreement

1. Bilateral, regional and other channels

123. Relevant information, in a tabular format, for the previous two reporting years without overlapping with the previous reporting periods, on bilateral and regional financial support provided, specifying:

(a) Year (calendar year, fiscal year);

(b) Amount (in United States dollars and domestic currency) (the face value and, on a voluntary basis, the grant-equivalent value);

(c) Recipient, including, to the extent possible, information on the recipient region or country and the title of the project, programme, activity or other (specify);

(d) Status (disbursed, committed);

(e) Channel (bilateral, regional, multi-bilateral, other (specify));

(f) Funding source (ODA, OOF, other (specify));

(g) Financial instrument (e.g. grant, concessional loan, non-concessional loan, equity, guarantee, insurance, other (specify));

(h) The type of support (e.g. adaptation, mitigation or cross-cutting);

(i) Sector (e.g. energy, transport, industry, agriculture, forestry, water and sanitation, cross-cutting, other (specify));

(j) Subsector, as available;

(k) Additional information, as available (such as project/programme details, implementing agency and, to the extent possible, link to relevant project/programme documentation);

(l) Whether it contributes to capacity-building and/or technology development and transfer objectives, as available.

2. Multilateral channels

124. Relevant information, in a tabular format, for the previous two reporting years without overlapping with the previous reporting periods, on financial support provided through multilateral channels, specifying:

(a) Year (calendar year, fiscal year);

(b) Institution (e.g. multilateral fund, the operating entities of the Financial Mechanism, entities of the Technology Mechanism, multilateral financial institution, international organization, other (specify));

(c) Amount (in United States dollars and domestic currency) (the face value and, on a voluntary basis, the grant-equivalent value);

(d) Core-general or climate-specific, as applicable;

(e) Inflows and/or outflows, as applicable;

(f) Recipient (e.g. country, region, global, project, programme, activity, other (specify)), as applicable, as available;

(g) Status (disbursed, committed);

(h) Channel (multilateral, multi-bilateral);

(i) Funding source (ODA, OOF, other (specify));

(j) Financial instrument (e.g. grant, concessional loan, non-concessional loan, equity, guarantee, insurance, other (specify));

(k) The type of support (e.g. adaptation, mitigation or cross-cutting), as available;

(l) Sector (e.g. energy, transport, industry, agriculture, forestry, water and sanitation, cross-cutting, other (specify)), as available;

(m) Subsector, as available;

(n) Whether it contributes to capacity-building and/or technology development and transfer objectives, as applicable, as available.

3. Information on finance mobilized through public interventions

125. Relevant information, in textual and/or tabular format, for the previous two reporting years without overlapping with the previous reporting periods, on financial support mobilized through public interventions through bilateral, regional and multilateral channels, including the operating entities of the Financial Mechanism and entities of the Technology Mechanism, as applicable and to the extent possible:

(a) Year (calendar year, fiscal year);

(b) Amount (in United States dollars and domestic currency) (the face value and, on a voluntary basis, the grant-equivalent value, if applicable);

(c) Amount of resources used to mobilize the support (in United States dollars and domestic currency);

(d) Type of public intervention used (e.g. grant, concessional loan, non-concessional loan, equity, guarantee, insurance, policy intervention, capacity-building, technology development and transfer, technical assistance);

(e) Recipient (country, region, global, project, programme, activity, other (specify));

(f) Channel (bilateral, regional, multilateral);

(g) The type of support (e.g. adaptation, mitigation or cross-cutting);

(h) Sector (e.g. energy, transport, industry, agriculture, forestry, water and sanitation, cross-cutting, other (specify));

(i) Subsector;

(j) Additional information.

D. Information on support for technology development and transfer provided under Article 10 of the Paris Agreement

126. Information, in textual format, on support for technology development and transfer provided under Article 10 of the Paris Agreement, including, to the extent possible, qualitative and/or quantitative information on:

(a) Strategies employed to support technology development and transfer, including case studies;

(b) Support provided at different stages of the technology cycle;

(c) Support for the development and enhancement of endogenous capacities and technologies of developing country Parties;

(d) Efforts to encourage private sector activities related to technology development and transfer and how such efforts support developing country Parties;

(e) Efforts to accelerate, encourage and enable innovation, including research, development and deployment efforts, and collaborative approaches to research and development;

(f) Knowledge generated.

127. Quantitative and/or qualitative information in a common tabular format on measures or activities related to support for technology development and transfer implemented or planned since their previous report, including, to the extent possible and as relevant:

(a) Title;

(b) Recipient entity;

(c) Description and objectives;

(d) Type of support (mitigation, adaptation or cross-cutting);

(e) Sector;

(f) Type of technology;

(g) Status of measure or activity;

(h) Whether the activity was undertaken by the public and/or private sector.

E. Information on capacity-building support provided under Article 11 of the Paris Agreement

128. Information, in textual format, on capacity-building support provided under Article 11 of the Paris Agreement, including, to the extent possible, qualitative and/or quantitative information on:

(a) Strategies employed to provide capacity-building support, including case studies;

(b) How capacity-building support that was provided responds to the existing and emerging capacity-building needs, priorities and gaps identified by developing country Parties in the areas of mitigation, adaptation, and technology development and transfer;

(c) Policies that promote capacity-building support;

(d) Involvement of stakeholders;

(e) How support for capacity-building actions in developing country Parties that was provided promotes the sharing of lessons learned and best practices.

129. Quantitative and/or qualitative information in a common tabular format on measures or activities related to capacity-building support implemented or planned since their previous report, including, to the extent possible and as relevant:

(a) Title;

(b) Recipient entity;

(c) Description and objectives;

(d) Type of support (mitigation, adaptation or cross-cutting);

(e) Status of measure or activity.

VI. Information on financial, technology development and transfer and capacity-building support needed and received under Articles 9–11 of the Paris Agreement

A. National circumstances, institutional arrangements and country-driven strategies

130. Developing country Parties should provide information on national circumstances and institutional arrangements relevant to reporting on support needed and received, including:

(a) A description of the systems and processes used to identify, track and report support needed and received, including a description of the challenges and limitations;

(b) Information on country priorities and strategies and on any aspects of the Party's NDC under Article 4 of the Paris Agreement that need support.

B. Underlying assumptions, definitions and methodologies

131. In reporting information on support needed and received, developing country Parties should describe the underlying assumptions, definitions and methodologies used to provide information on support needed and received, including, as applicable, those used to:

(a) Convert domestic currency into United States dollars;

(b) Estimate the amount of support needed;

(c) Determine the reporting year or time frame;

(d) Identify support as coming from specific sources;

(e) Determine support as committed, received or needed;

(f) Identify and report the status of the supported activity (planned, ongoing or completed);

(g) Identify and report the channel (bilateral, regional or multilateral);

(h) Identify and report the type of support (mitigation, adaptation or cross-cutting);

(i) Identify and report the financial instrument (grant, concessional loan, non-concessional loan, equity, guarantee or other);

(j) Identify and report sectors and subsectors;

(k) Report on the use, impact and estimated results of the support needed and received;

(l) Identify and report support as contributing to technology development and transfer and capacity-building;

(m) Avoid double counting in reporting information on support needed and received for the implementation of Article 13 of the Paris Agreement and transparency-related activities, including for transparency-related capacity-building, when reporting such information separately from other information on support needed and received.

C. Information on financial support needed by developing country Parties under Article 9 of the Paris Agreement

132. Developing country Parties should provide information on financial support needed under Article 9 of the Paris Agreement in textual format, including, to the extent possible and as available and as applicable:

(a) Sectors for which the Party wishes to attract international finance, including existing barriers to attracting international finance;

(b) Description of how the support will contribute to its NDC and to the long-term goals of the Paris Agreement.

133. Developing country Parties should provide, in a common tabular format, information on financial support needed, including the following, to the extent possible, and as available and as applicable:

(a) Title (of activity, programme or project);

(b) Programme/project description;

(c) Estimated amount (in domestic currency and in United States dollars);

(d) Expected time frame;

(e) Expected financial instrument (grant, concessional loan, non-concessional loan, equity, guarantee or other);

(f) Type of support (mitigation, adaptation or cross-cutting);

(g) Sector and subsector;

(h) Whether the activity will contribute to technology development and transfer and/or capacity-building, if relevant;

(i) Whether the activity is anchored in a national strategy and/or an NDC;

(j) Expected use, impact and estimated results.

D. Information on financial support received by developing country Parties under Article 9 of the Paris Agreement

134. Developing country Parties should provide, in a common tabular format, information on financial support received, including, to the extent possible, and as available and as applicable:

(a) Title (of activity, programme or project);

(b) Programme/project description;

(c) Channel;

(d) Recipient entity;

(e) Implementing entity;

(f) Amount received (in domestic currency and in United States dollars);

(g) Time frame;

(h) Financial instrument (grant, concessional loan, non-concessional loan, equity, guarantee or other);

(i) Status (committed or received);

(j) Sector and subsector;

(k) Type of support (mitigation, adaptation or cross-cutting);

(l) Whether the activity has contributed to technology development and transfer and/or capacity-building;

(m) Status of activity (planned, ongoing or completed);

(n) Use, impact and estimated results.

E. Information on technology development and transfer support needed by developing country Parties under Article 10 of the Paris Agreement

135. Developing country Parties should provide, in textual format, information on technology development and transfer support needed under Article 10 of the Paris Agreement, including on, to the extent possible, and as available and as applicable:

(a) Plans, needs and priorities related to technology development and transfer, including those identified in technology needs assessments, where applicable;

(b) Technology development and transfer related needs for the enhancement of endogenous capacities and technologies.

136. Developing country Parties should provide, in a common tabular format, information on technology development and transfer support needed, including, to the extent possible and as available and as applicable:

(a) Title (of activity, programme or project);

(b) Programme/project description;

(c) Type of support (mitigation, adaptation or cross-cutting);

(d) Type of technology;

(e) Expected time frame;

(f) Sector;

(g) Expected use, impact and estimated results.

F. Information on technology development and transfer support received by developing country Parties under Article 10 of the Paris Agreement

137. Developing country Parties should provide, in textual format, information on technology development and transfer support received under Article 10 of the Paris Agreement, including on, to the extent possible, and as available and as applicable:

(a) Case studies, including key success and failure stories;

(b) How the support contributes to technology development and transfer, endogenous capacities and know-how;

(c) The stage of the technology cycle supported, including research and development, demonstration, deployment, diffusion and transfer of technology.

138. Developing country Parties should provide, in a common tabular format, information on technology development and transfer support received, including on, to the extent possible, and as available and as applicable:

(a) Title (of activity, programme or project);

(b) Programme/project description;

(c) Type of technology;

(d) Time frame;

(e) Recipient entity;

(f) Implementing entity;

(g) Type of support (mitigation, adaptation or cross-cutting);

(h) Sector;

(i) Status of activity (planned, ongoing or completed);

(j) Use, impact and estimated results.

G. Information on capacity-building support needed by developing country Parties under Article 11 of the Paris Agreement

139. Developing country Parties should provide, in textual format, information on capacity-building support needed under Article 11 of the Paris Agreement, including on, to the extent possible and as available and as applicable:

(a) The approach a Party seeks to take to enhance capacity-building support;

(b) Country-specific capacity-building needs, constraints and gaps in communicating those needs, and an explanation of how the capacity-building support needed would improve the provision of such information;

(c) Processes for enhancing public awareness, public participation and access to information in relation to capacity-building.

140. Developing country Parties should provide, in a common tabular format, information on capacity-building support needed, including the following, to the extent possible, and as available and as applicable:

(a) Title (of activity, programme or project);

(b) Programme/project description;

(c) Expected time frame;

(d) Type of support (mitigation, adaptation or cross-cutting);

(e) Expected use, impact and estimated results.

H. Information on capacity-building support received by developing country Parties under Article 11 of the Paris Agreement

141. Developing country Parties should provide, in textual format, information on capacity-building support received under Article 11 of the Paris Agreement, including on, to the extent possible, and as available and as applicable:

(a) Case studies, including key success and failure stories;

(b) How support received has enhanced a Party's capacity;

(c) Capacity-building support received at the national and, where appropriate, subregional and regional level, including priorities, participation and the involvement of stakeholders.

142. Developing country Parties should provide, in a common tabular format, information on capacity-building support received, including the following, to the extent possible and as available and as applicable:

(a) Title (of activity, programme or project);

(b) Programme/project description;

(c) Implementing entity;

(d) Recipient entity;

(e) Type of support (mitigation, adaptation or cross-cutting);

(f) Time frame;

(g) Status of activity (planned, ongoing or completed);

(h) Use, impact and estimated results.

I. Information on support needed and received by developing country Parties for the implementation of Article 13 of the Paris Agreement and transparency-related activities, including for transparency-related capacity-building

143. Developing country Parties should provide information on support needed and received for implementing Article 13 of the Paris Agreement and transparency-related activities, including on, to the extent possible:

(a) Support needed and received for preparing reports pursuant to Article 13;

(b) Support needed and received for addressing the areas for improvement identified by the technical expert review teams.

144. Developing country Parties should provide, in a common tabular format, summary information on support needed and received for implementing Article 13 and transparency-related activities, including for transparency-related capacity-building, including, to the extent possible and as applicable:

(a) Title (of activity, programme or project);

(b) Objectives and description;

(c) Recipient entity;

(d) Channel;

(e) Amount (in domestic currency and in United States dollars);

(f) Time frame;

(g) Status of activity (planned, ongoing or completed);

(h) Use, impact and estimated results.

145. In reporting information on support needed and received for the implementation of Article 13 of the Paris Agreement and transparency-related activities, including for transparency-related capacity-building, developing country Parties should ensure the avoidance of double counting in reporting this information separately from other information on financial, technology development and capacity-building support that is needed or received.

VII. Technical expert review

A. Scope

146. A technical expert review consists of:

(a) A review of the consistency of the information submitted by the Party under Article 13, paragraphs 7 and 9, of the Paris Agreement with these MPGs, taking into account the flexibility accorded to the Party under Article 13, paragraph 2, of the Paris Agreement;

(b) Consideration of the Party's implementation and achievement of its NDC under Article 4 of the Paris Agreement;

(c) Consideration of the Party's support provided, as relevant;

(d) Identification of areas of improvement for the Party related to implementation of Article 13 of the Paris Agreement;

(e) For those developing country Parties that need it in the light of their capacities, assistance in identifying capacity-building needs.

147. The technical expert review shall pay particular attention to the respective national capabilities and circumstances of developing country Parties.

148. In accordance with Article 13, paragraph 3, of the Paris Agreement, the technical expert review will be implemented in a facilitative, non-intrusive, non-punitive manner, respectful of national sovereignty, and will avoid placing undue burden on Parties.

149. Technical expert review teams shall not:

(a) Make political judgments;

(b) Review the adequacy or appropriateness of a Party's NDC under Article 4 of the Paris Agreement, of its associated description pursuant to chapter III.B above, or of the indicators identified in chapter III.C above;

(c) Review the adequacy of a Party's domestic actions;

(d) Review the adequacy of a Party's support provided;

(e) For those developing country Parties that need flexibility in the light of their capacities, review the Party's determination to apply flexibility that has been provided for in these MPGs, including the self-determined estimated time frames referred to in paragraph 6 above, or whether a developing country Party possesses the capacity to implement that specific provision without flexibility.

B. Information to be reviewed

150. Information submitted under Article 13, paragraphs 7 and 9, of the Paris Agreement shall undergo a technical expert review consistent with the MPGs contained in this chapter. This includes:

(a) A national inventory report of anthropogenic emissions by sources and removals by sinks of GHGs, as referred to in paragraph 10(a) above, submitted by each Party;

(b) Information necessary to track progress made in implementing and achieving its NDC under Article 4, as referred to in paragraph 10(b) above, submitted by each Party;

(c) Information on financial, technology development and transfer and capacity-building support provided to developing country Parties under Articles 9, 10 and 11 of the Paris Agreement referred to in paragraph 10(d) above. Information submitted by other Parties that provide support, as referred to in Article 9, paragraph 2, of the Paris Agreement, may undergo a technical expert review of this reported information at the Party's discretion.

C. Technical expert review format

1. Definitions

151. A technical expert review may be conducted as a centralized review, in-country review, desk review or simplified review.

152. A centralized review is when the members of a technical expert review team conduct the review from a single, centralized location. During a centralized review, a single technical expert review team could review several Parties.

153. An in-country review is when the members of a technical expert review team conduct the review in the country of the Party undergoing a technical expert review. In-country visits will be scheduled, be planned and take place with the consent of, and in close coordination with, the Party subject to review.

154. A desk review is when the members of a technical expert review team conduct the review remotely from their respective countries.

155. A simplified review of a Party's national inventory report involves the secretariat undertaking an initial assessment of completeness and consistency with the MPGs, consistent with the initial assessment procedures.[2] A review of the findings of this initial assessment will form part of the consequent technical expert review of the Party's national inventory report.

2. Applicability

156. A Party's biennial transparency report that is not subject to an in-country or simplified review shall undergo a centralized or desk review.

157. The LDCs and SIDS may choose to participate in the same centralized review as a group. During a centralized group review, a single expert review team will review several biennial transparency reports from the LDCs and SIDS.

158. A Party shall undergo an in-country review for:

(a) The first biennial transparency report;

(b) At least two biennial transparency reports in a 10-year period, of which one is the biennial transparency report that contains information on the Party's achievement of its NDC under Article 4 of the Paris Agreement;

(c) A biennial transparency report if recommended in the technical expert review of the Party's previous biennial transparency report;

(d) A biennial transparency report upon the request of the Party under technical expert review.

159. Those developing country Parties that need flexibility in the light of their capacities with respect to paragraph 158 above have the flexibility to instead choose to undergo a centralized instead of an in-country review, but are encouraged to undergo an in-country review.

160. A desk review should not be conducted more often than once every five years, for the first biennial transparency report submitted following a Party's communication or update of its NDC under Article 4 or for a biennial transparency report that contains information on the Party's achievement of its NDC under Article 4.

161. A Party's national inventory report submitted in a year in which a biennial transparency report is not due shall be subject to a simplified review. A follow-up of the findings of the simplified review will form part of the technical expert review in the subsequent year.

D. Procedures

162. For in-country, centralized and desk reviews:

(a) The secretariat shall commence the preparation of the review process immediately following the submission of the information specified in chapter VII.B above and agree with the Party the dates of the technical expert review week at least 14 weeks prior to the technical expert review week. The secretariat may organize reviews of biennial transparency reports in a staggered manner between two consecutive reports;

(b) The secretariat shall compose a technical expert review team at least 10 weeks prior to the technical expert review week;

(c) The technical expert review team should communicate any preliminary questions to the Party at least four weeks prior to the technical expert review week. The technical expert review team may request additional information before or during the

[2] To be developed by the lead reviewers, with the assistance of the secretariat.

technical expert review week. The Party concerned should make every reasonable effort to provide the requested information within two weeks of the request; those developing country Parties that need flexibility in the light of their capacities with respect to this provision are instead encouraged to provide the information within three weeks of the request;

(d) The technical expert review team shall communicate to the Party concerned draft areas of improvement, constituting preliminary "recommendations" (for "shall" provisions) and/or "encouragements" (for non-"shall" provisions), and, for those developing country Parties that need flexibility in the light of their capacities, any capacity-building needs identified in consultation with the Party concerned, at the end of the technical expert review week;

(e) The technical expert review team shall, under its collective responsibility, prepare a draft technical expert review report and through the secretariat send it to the Party concerned for comment within two months of the technical expert review week;

(f) The Party concerned shall then be given up to one month from its receipt to provide comments; those developing country Parties that need flexibility in the light of their capacities with respect to this provision have the flexibility to instead provide comments within three months of receipt of the draft technical expert review report;

(g) The technical expert review team shall prepare the final version of the technical expert review report, taking into account the comments of the Party, within one month of receipt of the comments;

(h) Taking into account the procedures in the preceding paragraphs, the technical expert review team shall make every effort to complete the technical expert review report as early as possible and no later than 12 months from the start of the technical expert review process.

163. For simplified reviews, the secretariat should prepare a draft initial assessment and send it to the Party within six weeks of the submission of a Party's information specified in chapter VII.B above. The Party may then provide comments within four weeks of receipt of the draft initial assessment. The secretariat should address the Party's comments and publish the final initial assessment on the UNFCCC website within four weeks of receipt of the Party's comments.

E. Confidentiality

164. A Party may designate information provided to the technical expert review teams during the review as confidential. In such a case, the Party should provide the basis for protecting such information. In this case, technical expert review teams and the secretariat shall not make the information publicly available. The obligation of the members of the technical expert review team to maintain confidentiality continues after the completion of the technical expert review.

F. Role of the Party

165. The Party concerned shall cooperate with the technical expert review team and the secretariat and make every reasonable effort to respond to all questions and provide additional clarifying information and comments to the technical expert review report in a timely manner.

G. Role of the technical expert review team

166. Technical experts, in conducting reviews, shall adhere to these MPGs.

167. Technical experts shall participate in the technical expert review in their individual expert capacity.

H. Role of the secretariat

168. The secretariat shall organize technical expert reviews, including the coordination of a schedule, logistical and administrative arrangements of the review and provision of review tools and materials to the technical expert review team.

169. The secretariat, together with the lead reviewers referred to in chapter VII.I.3 below, shall facilitate communication between the Party and the technical expert review team.

170. The secretariat, under the guidance of the lead reviewers, shall compile and edit the final technical expert review reports.

171. The secretariat shall facilitate annual meetings of the lead reviewers.

I. Technical expert review team and institutional arrangements

1. General

172. Technical experts shall be nominated to the UNFCCC roster of experts by Parties and, as appropriate, by intergovernmental organizations.

173. Technical experts shall complete the training programme referred to in decision 18/CMA.1, paragraph 12(c), prior to serving on a technical expert review team.

174. Each transparency report submitted will be assigned to a single technical expert review team with members selected from the UNFCCC roster of experts.

2. Composition

175. Technical experts shall have recognized competence in the areas to be reviewed.

176. The secretariat shall compose a technical review team in such a way that the collective skills and competencies of the technical expert review teams correspond to the information to be reviewed, as specified in chapter VII.B above, and that the teams include experts for each significant GHG inventory sector, mitigation and support, cooperative approaches and internationally transferred mitigation outcomes under Article 6, and LULUCF, as relevant.

177. At least one team member should be fluent in a language of the Party under review, to the extent possible.

178. The secretariat shall select the members of the technical expert review team with a view to achieving a balance between experts from developed and developing country Parties. The secretariat shall ensure geographical and gender balance among the technical review experts, to the extent possible. When selecting members of the technical expert review team for centralized group reviews of biennial transparency reports from the LDCs and SIDS, the secretariat shall strive to include technical experts from the LDCs and SIDS.

179. Two successive reviews of a Party's submission cannot be performed by the same technical expert review team.

180. Every effort should be made to select lead reviewers who have participated in reviews under the Convention or Article 13 of the Paris Agreement.

181. The technical expert review team shall include two lead reviewers, one from a developed country Party and another from a developing country Party.

182. Experts from developing country Parties participating in the technical expert review team shall be funded according to the existing procedures for participation in UNFCCC activities.

3. Lead reviewers

183. Lead reviewers shall oversee the work of the technical expert review team and act as co-lead reviewers, in accordance with these MPGs.

184. Lead reviewers should ensure that the technical expert reviews in which they participate are conducted in accordance with the MPGs contained in this chapter. The lead reviewers should also ensure the quality and objectivity of the technical expert review and provide for the continuity, consistency across Parties and timeliness of the technical expert reviews.

185. Lead reviewers shall communicate necessary information to the technical expert review team; monitor the progress of the technical expert review; coordinate the submission of queries of the technical expert review team to the Party concerned and coordinate the inclusion of the answers in the technical expert review report; give priority to issues raised in previous technical expert review reports; and provide technical advice to the members of the technical expert review team.

186. Lead reviewers shall meet annually at a lead reviewers' meeting to discuss how to improve the quality, efficiency and consistency of technical expert reviews, and develop conclusions on these meetings.

J. Technical expert review report

187. A technical expert review report shall contain the results of a technical expert review in accordance with the scope identified in chapter VII.A above.

188. Technical expert review reports shall be made publicly available on the UNFCCC website.

VIII. Facilitative, multilateral consideration of progress

A. Scope

189. A facilitative, multilateral consideration of progress is undertaken with respect to the Party's efforts under Article 9 of the Paris Agreement and the Party's respective implementation and achievement of its NDC.

B. Information to be considered

190. Information to be considered in a facilitative, multilateral consideration of progress includes:

(a) Information submitted by the Party as referred to in paragraph 10(a) and (b) and paragraph 10(d) and (e) above, as applicable;

(b) The Party's technical expert review report pursuant to chapter VII.J above;

(c) Any additional information provided by the Party for the purpose of the facilitative, multilateral consideration of progress.

C. Format and steps

191. A facilitative, multilateral consideration of progress shall include two phases: a written question and answer phase, followed by a working group session phase.

192. The written question and answer phase shall consist of the following steps:

(a) Any Party may submit written questions to the Party concerned, consistent with the scope identified in chapter VIII.A above;

(b) Such questions shall be submitted through an online platform that opens three months prior to the working group session. The Party concerned may respond to questions that are received later than two months prior to the working group session at its discretion;

(c) The Party in question shall make best efforts to respond in writing to the questions no later than one month prior to the working group session through the online platform; those developing country Parties that need flexibility in the light of their capacities with respect to this provision have the flexibility to instead submit written responses up to two weeks prior to the working group session. The Party may indicate in its response if it considers the written question to be outside the scope of a facilitative, multilateral consideration of progress;

(d) The secretariat shall compile the questions and answers and publish them on the UNFCCC website prior to the working group session phase.

193. The working group session phase shall take place during sessions of the Subsidiary Body for Implementation (SBI) and consist of the following steps:

(a) A presentation by the Party;

(b) A discussion session focused on the Party's presentation and the information identified in chapter VIII.B above. All Parties may participate in the discussion session and raise questions to the Party concerned. Working group sessions shall be open to observation by registered observers and shall be made publicly accessible through an online live recording;

(c) A Party may provide additional written responses to questions raised during the discussion session in writing through the online platform within 30 days following the session.

194. During the working group session phase of a facilitative, multilateral consideration of progress, the LDCs and SIDS may choose to participate as a group.

195. The secretariat shall establish an online platform to, inter alia:

(a) Allow a Party to hold a webinar ahead of and/or after an SBI session;

(b) Facilitate the written question and answer phase;

(c) Facilitate the working group session phase, including by allowing participation during the working group session by experts in remote locations.

196. The secretariat shall also coordinate the practical arrangements of a facilitative, multilateral consideration of progress.

D. Frequency and timing

197. A facilitative, multilateral consideration of progress will take place as soon as possible following the publication of a Party's technical expert review report. Should the technical expert review report not be available within 12 months of the submission of the Party's biennial transparency report, the secretariat will make arrangements for the Party to participate in a facilitative, multilateral consideration of progress at the next available opportunity.

198. If a Party does not submit a biennial transparency report within 12 months of the due date identified in decision 18/CMA.1, the secretariat, in consultation with the Party concerned, will make arrangements for the Party to participate in a facilitative, multilateral consideration of progress at the next available opportunity.

E. Record

199. Within one month of the working group session, the secretariat shall prepare and publish on the UNFCCC website a record of the facilitative, multilateral consideration of progress for the Party concerned, which will include:

(a) Questions submitted and responses provided;

(b) A copy of the Party's presentation;

(c) A recording of the working group session;

(d) A procedural summary of the Party's facilitative, multilateral consideration of progress;

(e) Any additional information generated through the online platform, as available.

26th plenary meeting
15 December 2018

Decision 19/CMA.1

Matters relating to Article 14 of the Paris Agreement and paragraphs 99–101 of decision 1/CP.21

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling Articles 2 and 14 of the Paris Agreement, decision 1/CP.21, paragraphs 99–101, and other relevant Articles of the Paris Agreement and paragraphs of decision 1/CP.21,

Recognizing that the global stocktake referred to in Article 14 of the Paris Agreement is crucial for enhancing the collective ambition of action and support towards achieving the purpose and long-term goals of the Paris Agreement,

I. Modalities

Overarching elements

1. *Recalls*, as provided in Article 14, paragraph 1, of the Paris Agreement, that the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement shall periodically take stock of the implementation of the Paris Agreement to assess the collective progress towards achieving the purpose of the Agreement and its long-term goals, and that it shall do so in a comprehensive and facilitative manner, considering mitigation, adaptation and the means of implementation and support, and in the light of equity and the best available science;

2. *Decides* that equity and the best available science will be considered in a Party-driven and cross-cutting manner, throughout the global stocktake;

3. *Also decides* that the global stocktake will consist of the following components:

(a) Information collection and preparation, focusing on gathering, compiling and synthesizing information and preparing for conducting the technical assessment referred to in paragraph 3(b) below;

(b) Technical assessment, focusing on taking stock of the implementation of the Paris Agreement to assess the collective progress towards achieving the purpose and long-term goals of the Paris Agreement, as well as opportunities for enhanced action and support to achieve its purpose and goals;

(c) Consideration of outputs, focusing on discussing the implications of the findings of the technical assessment with a view to achieving the outcome of the global stocktake of informing Parties in updating and enhancing, in a nationally determined manner, their actions and support, in accordance with relevant provisions of the Paris Agreement, as well as in enhancing international cooperation for climate action;

4. *Further* decides that the global stocktake will be conducted with the assistance of the Subsidiary Body for Implementation and the Subsidiary Body for Scientific and Technological Advice, which will establish a joint contact group on the matter;

5. *Resolves* to engage in a technical dialogue that aims to support the work of the joint contact group referred to in paragraph 4 above through expert consideration of inputs, as identified in the sources of input referred to in paragraphs 36 and 37 below for the global stocktake;

6. *Decides* to establish the technical dialogue referred to in paragraph 5 above, which will:

(a) Undertake its work through a focused exchange of views, information and ideas in in-session round tables, workshops or other activities;

(b) Organize its work in line with taking stock of the implementation of the Paris Agreement to assess the collective progress towards achieving its purpose and long-term goals, including under Article 2, paragraph 1(a–c), in the thematic areas of mitigation, adaptation and means of implementation and support, noting, in this context, that the global stocktake may take into account, as appropriate, efforts related to its work that:

(i) Address the social and economic consequences and impacts of response measures;

(ii) Avert, minimize and address loss and damage associated with the adverse effects of climate change;

(c) Be facilitated by two co-facilitators,[1] who will be responsible for conducting the dialogue and for preparing a factual synthesis report and other outputs of the technical assessment, with the assistance of the secretariat;

7. *Requests* the Chairs of the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation to develop guiding questions for all components of the global stocktake, including specific thematic and cross-cutting questions, one session of the subsidiary bodies prior to the relevant activities under the global stocktake being carried out;

8. *Decides* that the information collection and preparation component of the global stocktake will commence one session before the start of the technical assessment, which will take place during the two (or depending on the timing of the publication of the Intergovernmental Panel on Climate Change reports, three) successive sessions of the subsidiary bodies preceding the sixth session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (November 2023), during which the consideration of outputs will take place, with the cycle repeating every five years thereafter;

9. *Also* decides that the global stocktake will be conducted in a comprehensive, facilitative, effective and efficient manner, avoiding duplication of work and taking into account the results of relevant work conducted under the Paris Agreement, the Convention and the Kyoto Protocol;

10. *Further decides* that the global stocktake will be a Party-driven process conducted in a transparent manner and with the participation of non-Party stakeholders, and that, to support such effective and equitable participation, all inputs will be fully accessible by Parties, including online, as referred to in paragraph 21 below;

11. *Decides* that the participation of Parties in the global stocktake should be ensured through the provision of adequate funding for the participation and representation of developing country Parties in all activities under the global stocktake, including the technical dialogue, workshops, round tables and sessions of the subsidiary bodies and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement that feature global stocktake activities, in accordance with existing practices;

12. *Invites* developed country Parties to mobilize support for capacity-building so that the least developed countries, small island developing States and other developing countries can effectively participate in the global stocktake and take up relevant global stocktake information;

13. *Decides* that the outputs of the components of the global stocktake referred to in paragraph 3 above should summarize opportunities and challenges for enhancing action and support in the light of equity and the best available science, as well as lessons learned and good practices, with a view to achieving the outcome identified in Article 14, paragraph 3, of the Paris Agreement;

14. *Emphasizes* that the outputs of the global stocktake should focus on taking stock of the implementation of the Paris Agreement to assess collective progress, have no individual Party focus, and include non-policy prescriptive consideration of collective progress that Parties can use to inform the updating and enhancing, in a nationally determined manner, of

[1] One from a developing country Party and one from a developed country Party selected by Parties.

their actions and support in accordance with relevant provisions of the Paris Agreement as well as in enhancing international cooperation for climate action;

15. *Decides* to consider refining the procedural and logistical elements of the overall global stocktake process on the basis of experience gained from the first and subsequent global stocktakes, as appropriate;

16. *Requests* the Chairs of the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation to organize the global stocktake in a flexible and appropriate manner, to work on identifying opportunities for learning-by-doing, including for assessing collective progress, and to take the necessary steps for the consideration of inputs as they become available;

17. *Invites* Parties to present their nationally determined contributions, informed by the outcome of the global stocktake, at a special event held under the auspices of the Secretary-General of the United Nations;

18. *Recognizes* that other related events within and outside the UNFCCC can contribute to the global stocktake and the implementation of its outcome;

Information collection and preparation

19. *Requests* the Chairs of the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation to issue a call for the inputs referred to in paragraphs 36 and 37 below, taking into account that such inputs should be submitted at least three months before their consideration in the technical assessment;

20. *Decides* that the information collection and preparation component of the global stocktake will end no later than six months before the consideration of outputs to ensure timely consideration of inputs, unless critical information that requires consideration emerges after the cut-off date;

21. *Requests* the secretariat to facilitate online availability of all inputs to the global stocktake from Parties, by thematic area, and to organize a webinar to clarify the methodologies and assumptions used to aggregate the inputs, to be held after the deadline for submission of inputs referred to in paragraph 19 above and prior to the commencement of the technical assessment;

22. *Invites* the secretariat to start compiling for the technical assessment the most up-to-date inputs from the sources identified in paragraph 37 below two sessions of the subsidiary bodies prior to the assessment;

23. *Requests* the secretariat, under the guidance of the co-facilitators referred to in paragraph 6(c) above, to prepare for the technical assessment:

(a) A synthesis report on the information identified in paragraph 36(a) below, taking into account previous experience in preparing such reports;

(b) A synthesis report on the state of adaptation efforts, experience and priorities, summarizing the most recent information identified in paragraph 36(c) below;

(c) A synthesis report on the overall effect of nationally determined contributions communicated by Parties, summarizing the most recent information identified in paragraph 36(b) below;

(d) A synthesis report on the information identified in paragraph 36(d) below;

24. *Invites* the relevant constituted bodies and forums and other institutional arrangements under or serving the Paris Agreement and/or the Convention[2] to prepare for the technical

[2] Currently, the constituted bodies and forums are the Adaptation Committee, the Least Developed Country Expert Group, the Technology Executive Committee, the Standing Committee on Finance, the Paris Committee on Capacity-building, the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, the Consultative Group of Experts, the forum on the impact of the implementation of response measures, and the Local Communities and Indigenous Peoples Platform Facilitative Working Group.

assessment, with the assistance of the secretariat, synthesis reports on the information identified in paragraph 36 below in their areas of expertise;

25. *Requests* the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation to identify potential information gaps in relation to the global stocktake and, where necessary and feasible, to make requests for additional input, taking into account the cut-off date for the information collection and preparation component of the global stocktake and the need to consider critical information, and taking into account the relevant gaps identified in the reports of the Intergovernmental Panel on Climate Change and their impacts in relation to the purpose and long-term goals of the Paris Agreement;

Technical assessment

26. *Notes* that, to make effective use of time, the technical assessment could overlap with the information collection and preparation component of the global stocktake;

27. *Confirms* that all the inputs and topics, in particular the linkage among various issues, should be discussed in a balanced, holistic and comprehensive manner with a balanced allocation of time between thematic areas, taking into account equity considerations and the best available science;

28. *Recognizes*, taking into consideration the advice provided by the Subsidiary Body for Scientific and Technological Advice[3] pursuant to decision 1/CP.21, paragraph 100, that the assessments of the Intergovernmental Panel on Climate Change should be considered in an effective and balanced manner, taking into account lessons learned from past experience;

29. *Also recognizes* that a dialogue between Intergovernmental Panel on Climate Change experts and Parties through Subsidiary Body for Scientific and Technological Advice–Intergovernmental Panel on Climate Change special events should be used to enable a focused scientific and technical exchange of information on the findings in Intergovernmental Panel on Climate Change products in an open and transparent manner, and that the Subsidiary Body for Scientific and Technological Advice–Intergovernmental Panel on Climate Change Joint Working Group should continue to be used to enhance communication and coordination between the Subsidiary Body for Scientific and Technological Advice and the Intergovernmental Panel on Climate Change in the context of the global stocktake;

30. *Decides* that the technical dialogue referred to in paragraph 6 above will be open, inclusive, transparent and facilitative, and will allow Parties to engage and hold discussions with the constituted bodies and forums and other institutional arrangements under or serving the Paris Agreement and/or the Convention and experts and to consider inputs and assess collective progress;

31. *Also decides* that the co-facilitators of the technical dialogue will summarize its outputs in summary reports, taking into account equity and the best available science, for each thematic area referred to in paragraph 6(b) above and an overarching factual synthesis of these reports in a cross-cutting manner;

32. *Further* decides that the forum on the impact of the implementation of response measures will summarize its outcome in accordance with the relevant elements of its modalities, work programme and functions pursuant to decision 1/CP.21, paragraph 34;

Consideration of outputs

33. *Decides* that the consideration of outputs will consist of high-level events where the findings of the technical assessment will be presented and their implications discussed and considered by Parties, and that the events will be chaired by a high-level committee consisting of the Presidencies of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement and the Chairs of the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation;

[3] See document FCCC/SBSTA/2016/4, paragraph 56.

34. *Also decides* that the outputs of this component of the global stocktake should:

(a) Identify opportunities for and challenges in enhancing action and support for collective progress in relation to the thematic areas of the global stocktake referred to in paragraph 6(b) above, as well as possible measures and good practices and international cooperation and related good practices;

(b) Summarize key political messages, including recommendations arising from the events referred to in paragraph 33 above for strengthening action and enhancing support;

(c) Be referenced in a decision for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement and/or a declaration;

II. Sources of input

35. *Decides* that the sources of input for the global stocktake should inform the thematic areas referred to in paragraph 6(b) above;

36. *Also decides* that the sources of input for the global stocktake will consider information at a collective level on:

(a) The state of greenhouse gas emissions by sources and removals by sinks and mitigation efforts undertaken by Parties, including the information referred to in Article 13, paragraph 7(a), and Article 4, paragraphs 7, 15 and 19, of the Paris Agreement;

(b) The overall effect of Parties' nationally determined contributions and overall progress made by Parties towards the implementation of their nationally determined contributions, including the information referred to in Article 13, paragraph 7(b), of the Paris Agreement;

(c) The state of adaptation efforts, support, experience and priorities, including the information referred to in Article 7, paragraphs 2, 10, 11 and 14, of the Paris Agreement, and the reports referred to in Article 13, paragraph 8, of the Paris Agreement;

(d) The finance flows, including the information referred to in Article 2, paragraph 1(c), and means of implementation and support and mobilization and provision of support, including the information referred to in Article 9, paragraphs 4 and 6, Article 10, paragraph 6, Article 11, paragraph 3, and Article 13, in particular paragraphs 9 and 10, of the Paris Agreement. This should include information from the latest biennial assessment and overview of climate finance flows of the Standing Committee on Finance;

(e) Efforts to enhance understanding, action and support, on a cooperative and facilitative basis, related to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change;

(f) Barriers and challenges, including finance, technology[4] and capacity-building gaps, faced by developing countries;

(g) Good practices, experience and potential opportunities to enhance international cooperation on mitigation and adaptation and to increase support under Article 13, paragraph 5, of the Paris Agreement;

(h) Fairness considerations, including equity, as communicated by Parties in their nationally determined contributions;

37. *Decides* that the sources of input for the global stocktake include:

(a) Reports and communications from Parties, in particular those submitted under the Paris Agreement and the Convention;

(b) The latest reports of the Intergovernmental Panel on Climate Change, pursuant to decision 1/CP.21, paragraph 99;

[4] Including outputs of the periodic assessment of the Technology Mechanism as referred to in decision 16/CMA.1.

(c) Reports of the subsidiary bodies, pursuant to decision 1/CP.21, paragraph 99;

(d) Reports from relevant constituted bodies and forums and other institutional arrangements under or serving the Paris Agreement and/or the Convention;

(e) The synthesis reports by the secretariat referred to in paragraph 23 above;

(f) Relevant reports from United Nations agencies and other international organizations, which should be supportive of the UNFCCC process;

(g) Voluntary submissions from Parties, including on inputs to inform equity considerations under the global stocktake;

(h) Relevant reports from regional groups and institutions;

(i) Submissions from non-Party stakeholders and UNFCCC observer organizations;

38. *Invites* the Subsidiary Body for Scientific and Technological Advice to complement the non-exhaustive lists in paragraphs 36 and 37 above at its session held prior to the information collection and preparation component of the global stocktake, as appropriate, taking into account the thematic areas of the global stocktake and the importance of leveraging national-level reporting.

26th plenary meeting
15 December 2018

Decision 20/CMA.1

Modalities and procedures for the effective operation of the committee to facilitate implementation and promote compliance referred to in Article 15, paragraph 2, of the Paris Agreement

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling Article 15 of the Paris Agreement and decision 1/CP.21, paragraphs 102 and 103,

1. *Adopts* the modalities and procedures for the effective operation of the committee referred to in Article 15, paragraph 2, of the Paris Agreement as contained in the annex;

2. *Decides* to undertake, at the seventh session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (2024), the first review of the modalities and procedures referred to in paragraph 1 above on the basis of experience gained with their implementation and taking into account any recommendations of the committee referred to in paragraph 1 above, and to consider conducting further reviews on a regular basis;

3. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat pursuant to the provisions contained in the annex;

4. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

Annex

Modalities and procedures for the effective operation of the committee referred to in Article 15, paragraph 2, of the Paris Agreement

I. Purpose, principles, nature, functions and scope

1. The mechanism to facilitate implementation of and promote compliance with the provisions of the Paris Agreement established under Article 15 of the Agreement consists of a committee (hereinafter referred to as the Committee).

2. The Committee shall be expert-based and facilitative in nature and function in a manner that is transparent, non-adversarial and non-punitive. The Committee shall pay particular attention to the respective national capabilities and circumstances of Parties.

3. The Committee's work shall be guided by the provisions of the Paris Agreement, including its Article 2.

4. In carrying out its work, the Committee shall strive to avoid duplication of effort, shall neither function as an enforcement or dispute settlement mechanism, nor impose penalties or sanctions, and shall respect national sovereignty.

II. Institutional arrangements

5. The Committee shall consist of 12 members with recognized competence in relevant scientific, technical, socioeconomic or legal fields to be elected by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA) on the basis of equitable geographical representation, with 2 members each from the five regional groups of the United Nations and 1 member each from the small island developing States and the least developed countries, taking into account the goal of gender balance.

6. The CMA shall elect members of the Committee as well as an alternate for each member, taking into account the expert-based nature of the Committee and striving to reflect the diversity of expertise referred to in paragraph 5 above.

7. Members and alternate members shall be elected to the Committee to serve for a period of three years and for a maximum of two consecutive terms.

8. At CMA 2 (December 2019), six members and six alternate members shall be elected to the Committee for an initial term of two years and six members and six alternate members for a term of three years. Thereafter, the CMA shall elect at its relevant regular sessions six members and six alternate members for a term of three years. The members and alternate members shall remain in office until their successors are elected.

9. If a member of the Committee resigns or is otherwise unable to complete the assigned term or to perform the functions in the Committee, an expert from the same Party shall be named by that Party to replace said member for the remainder of the unexpired term.

10. Members and alternate members of the Committee shall serve in their individual expert capacity.

11. The Committee shall elect from among its members two Co-Chairs for a period of three years, taking into account the need to ensure equitable geographical representation. The Co-Chairs shall perform the functions to be elaborated in the rules of procedure of the Committee referred to in paragraphs 17 and 18 below.

12. Unless otherwise decided, the Committee shall meet at least twice a year, beginning in 2020. In scheduling its meetings, the Committee should take into account the desirability of holding its meetings in conjunction with sessions of the subsidiary bodies serving the Paris Agreement, as appropriate.

13. Only members and alternate members of the Committee and secretariat officials shall be present during the elaboration and adoption of a decision of the Committee.

14. The Committee, any Party or others involved in the process of the consideration by the Committee shall protect the confidentiality of information received in confidence.

15. The adoption of decisions by the Committee shall require a quorum of 10 of the members to be present.

16. The Committee shall make every effort to reach agreement on any decision by consensus. If all efforts at reaching consensus have been exhausted, as a last resort, the decision may be adopted by at least three quarters of the members present and voting.

17. The Committee shall develop rules of procedure with a view to recommending them to the CMA for consideration and adoption at CMA 3 (November 2020), informed by the principles of transparency, facilitation, the non-adversarial and non-punitive function, and paying particular attention to the respective national capabilities and circumstances of Parties.

18. The rules of procedure referred to in paragraph 17 above will address any matters necessary for the proper and effective functioning of the Committee, including the role of the Committee Co-Chairs, conflict of interest, any additional timelines related to the Committee's work, procedural stages and timelines for the Committee's work, and reasoning in decisions of the Committee.

III. Initiation and process

19. In exercising its functions referred to in paragraphs 20 and 22 below, and subject to these modalities and procedures, the Committee shall apply the relevant rules of procedure to be developed pursuant to paragraphs 17 and 18 above and shall be guided by the following:

(a) Nothing in the work of the Committee may change the legal character of the provisions of the Paris Agreement;

(b) In considering how to facilitate implementation and promote compliance, the Committee shall endeavour to constructively engage with and consult the Party concerned at all stages of the process, including by inviting written submissions and providing opportunities to comment;

(c) The Committee shall pay particular attention to the respective national capabilities and circumstances of Parties, recognizing the special circumstances of the least developed countries and small island developing States, at all stages of the process, in accordance with the provisions of the Paris Agreement, including in determining how to consult with the Party concerned, what assistance can be provided to the Party concerned to support its engagement with the Committee, and what measures are appropriate to facilitate implementation and promote compliance in each situation;

(d) The Committee should take into account the work being undertaken by other bodies and under other arrangements as well as through forums serving or established under the Paris Agreement with a view to avoiding duplication of mandated work;

(e) The Committee should take into account considerations related to the impacts of response measures.

20. The Committee should consider issues related to, as appropriate, a Party's implementation of or compliance with the provisions of the Paris Agreement on the basis of a written submission from that Party with respect to its own implementation of and/or compliance with any provision of the Paris Agreement.

21. The Committee will undertake a preliminary examination of the submission within the timeline to be elaborated in the rules of procedure referred to in paragraphs 17 and 18 above with a view to verifying that the submission contains sufficient information, including on whether the matter relates to the Party's own implementation of or compliance with a provision of the Paris Agreement.

22. The Committee:

(a) Will initiate the consideration of issues in cases where a Party has not:

(i) Communicated or maintained a nationally determined contribution under Article 4 of the Paris Agreement, based on the most up-to-date status of communication in the public registry referred to in Article 4, paragraph 12, of the Paris Agreement;

(ii) Submitted a mandatory report or communication of information under Article 13, paragraphs 7 and 9, or Article 9, paragraph 7, of the Paris Agreement;

(iii) Participated in the facilitative, multilateral consideration of progress, based on information provided by the secretariat;

(iv) Submitted a mandatory communication of information under Article 9, paragraph 5, of the Paris Agreement;

(b) May, with the consent of the Party concerned, engage in a facilitative consideration of issues in cases of significant and persistent inconsistencies of the information submitted by a Party pursuant to Article 13, paragraphs 7 and 9, of the Paris Agreement with the modalities, procedures and guidelines referred to in Article 13, paragraph 13, of the Paris Agreement. This consideration will be based on the recommendations made in the final technical expert review reports, prepared under Article 13, paragraphs 11 and 12, of the Agreement, together with any written comments provided by the Party during the review. In its consideration of such matters, the Committee shall take into account Article 13, paragraphs 14 and 15, of the Agreement, as well as the flexibilities provided in the provisions of the modalities, procedures and guidelines under Article 13 of the Paris Agreement for those developing country Parties that need it in the light of their capacities.

23. The consideration of the issues referred to in paragraph 22(a) above will not address the content of the contributions, communications, information and reports referred to in paragraph 22(a)(i–iv) above.

24. Where the Committee decides to initiate a consideration as referred to in paragraph 22 above, it shall notify the Party concerned and request it to provide the necessary information on the matter.

25. With respect to the consideration by the Committee of matters initiated in accordance with the provisions of paragraphs 20 or 22 above and further to the rules of procedure referred to in paragraphs 17 and 18 above:

(a) The Party concerned may participate in the discussions of the Committee, except during the Committee's elaboration and adoption of a decision;

(b) If so requested in writing by the Party concerned, the Committee shall hold a consultation during the meeting at which the matter with respect to that Party is to be considered;

(c) In the course of its consideration, the Committee may obtain additional information as referred to in paragraph 35 below or, as appropriate and in consultation with the Party concerned, invite representatives of relevant bodies and arrangements under or serving the Paris Agreement to participate in its relevant meetings;

(d) The Committee shall send a copy of its draft findings, draft measures and any draft recommendations to the Party concerned and shall take into account any comments made by the Party when finalizing those findings, measures and recommendations.

26. The Committee will accord flexibility with regard to timelines of the procedures under Article 15 as may be needed by Parties, paying particular attention to their respective national capabilities and circumstances.

27. Subject to the availability of financial resources, assistance should be provided, upon request, to developing country Parties concerned to enable their necessary participation in the relevant meetings of the Committee.

IV. Measures and outputs

28. In identifying the appropriate measures, findings or recommendations, the Committee shall be informed by the legal nature of the relevant provisions of the Paris Agreement, shall take into account the comments received from the Party concerned and shall pay particular attention to the national capabilities and circumstances of the Party concerned. Special circumstances of small island developing States and the least developed countries, as well as situations of force majeure, should also be recognized, where relevant.

29. The Party concerned may provide to the Committee information on particular capacity constraints, needs or challenges, including in relation to support received, for the Committee's consideration in its identification of appropriate measures, findings or recommendations.

30. With a view to facilitating implementation and promoting compliance, the Committee shall take appropriate measures. These may include the following:

(a) Engage in a dialogue with the Party concerned with the purpose of identifying challenges, making recommendations and sharing information, including in relation to accessing finance, technology and capacity-building support, as appropriate;

(b) Assist the Party concerned in the engagement with the appropriate finance, technology and capacity-building bodies or arrangements under or serving the Paris Agreement in order to identify possible challenges and solutions;

(c) Make recommendations to the Party concerned with regard to challenges and solutions referred to in paragraph 30(b) above and communicate such recommendations, with the consent of the Party concerned, to the relevant bodies or arrangements, as appropriate;

(d) Recommend the development of an action plan and, if so requested, assist the Party concerned in developing the plan;

(e) Issue findings of fact in relation to matters of implementation and compliance referred to in paragraph 22(a) above.

31. The Party concerned is encouraged to provide information to the Committee on the progress made in implementing the action plan referred to in paragraph 30(d) above.

V. Consideration of systemic issues

32. The Committee may identify issues of a systemic nature with respect to the implementation of and compliance with the provisions of the Paris Agreement faced by a number of Parties and bring such issues and, as appropriate, any recommendations to the attention of the CMA for its consideration.

33. The CMA may, at any time, request the Committee to examine issues of a systemic nature. Following its consideration of the issue, the Committee shall report back to the CMA and, where appropriate, make recommendations.

34. In addressing systemic issues, the Committee shall not address matters that relate to the implementation of and compliance with the provisions of the Paris Agreement by an individual Party.

VI. Information

35. In the course of its work, the Committee may seek expert advice, and seek and receive information from processes, bodies, arrangements and forums under or serving the Paris Agreement.

VII. Relationship with the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement

36. Pursuant to Article 15 of the Paris Agreement, the Committee shall report annually to the CMA.

VIII. Secretariat

37. The secretariat referred to in Article 17 of the Paris Agreement shall serve as the secretariat of the Committee.

26th plenary meeting
15 December 2018

Resolution 3/CMA.1

Expression of gratitude to the Government of the Republic of Poland and the people of the city of Katowice

Resolution submitted by Fiji

The Conference of the Parties, the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Having met in Katowice from 2 to 14 December 2018,

1. *Express their profound gratitude* to the Government of the Republic of Poland for having made it possible for the twenty-fourth session of the Conference of the Parties, the fourteenth session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol and the third part of the first session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement to be held in Katowice;

2. *Request* the Government of the Republic of Poland to convey to the city and people of Katowice the gratitude of the Conference of the Parties, the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement for the hospitality and warmth extended to the participants.

28th plenary meeting
15 December 2018

Decision 2/CMA.2

Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts and its 2019 review

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,[1]

Recalling decision 2/CP.19, whereby the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts was established to address loss and damage associated with the impacts of climate change, including extreme events and slow onset events, in developing countries that are particularly vulnerable to the adverse effects of climate change,

Also recalling decisions 3/CP.18, 2/CP.19, 2/CP.20, 1/CP.21, 2/CP.21, 3/CP.22, 4/CP.22, 5/CP.23 and 10/CP.24,

Further recalling Article 8 of the Paris Agreement,

Being aware of the relevant provisions of decisions 18/CMA.1 and 19/CMA.1,

Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity,

Reaffirming the role of the Warsaw International Mechanism in promoting the implementation of approaches to avert, minimize and address loss and damage associated with climate change impacts in a comprehensive, integrated and coherent manner,

Also reaffirming the role of the Executive Committee of the Warsaw International Mechanism in guiding the implementation of the functions of the Mechanism,

Recognizing the current insufficient level of mitigation and that reducing greenhouse gas emissions reduces the risks associated with the adverse effects of climate change,

Also recognizing the importance of the Warsaw International Mechanism for averting, minimizing and addressing loss and damage in developing countries that are particularly vulnerable to the adverse effects of climate change,

Recalling that the Conference of the Parties at its twenty-second session recommended that the next review of the Warsaw International Mechanism be held in 2019,[2]

Acknowledging the Executive Committee's decision to identify follow-up activities to the 2019 review of the Warsaw International Mechanism under strategic workstream (e) of its five-year rolling workplan at its first meeting of 2020,

Also acknowledging that the Executive Committee agreed to discuss its role in and contribution to the global stocktake at its future meetings, starting with its first meeting of 2020,

Noting that the Executive Committee will evaluate progress in implementing its five-year rolling workplan in 2020 and at regular intervals at its subsequent meetings,

Having considered the effectiveness and efficiency of the Warsaw International Mechanism, as well as barriers and gaps, challenges and opportunities, and lessons learned

[1] It is noted that discussions related to the governance of the Warsaw International Mechanism did not produce an outcome; this is without prejudice to further consideration of this matter.

[2] Decision 4/CP.22, para. 2(b).

in relation to the Mechanism, on the basis of the terms of reference for the 2019 review of the Mechanism,[3]

1. *Welcomes* the report of the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, including the recommendations contained therein;[4]

2. *Also welcomes* the adoption of the plans of action of the task force on displacement and the technical expert group on comprehensive risk management by the Executive Committee during its 10th meeting;

3. *Appreciates* the contribution of all organizations and experts to the work of the Executive Committee, the task force on displacement and the technical expert group on comprehensive risk management;

4. *Acknowledges* the catalytic role of the Warsaw International Mechanism in mobilizing and connecting relevant stakeholders;

5. *Also acknowledges* the progress, achievements and successful practices in implementing the Warsaw International Mechanism since 2013, while noting areas for improvement and shortcomings;

6. *Further acknowledges* that further work is needed to effectively operationalize the functions of the Warsaw International Mechanism as set out in decision 2/CP.19, paragraph 5;

7. *Agrees* that further guidance could contribute to improving the effectiveness and efficiency of the Warsaw International Mechanism, including its timeliness, relevance, visibility, coherence, complementarity, comprehensiveness, responsiveness and resourcing and the delivery and usefulness of its products and outputs;

8. *Also agrees* that the best available science, particularly in reports of the Intergovernmental Panel on Climate Change, should inform approaches to averting, minimizing and addressing loss and damage associated with climate change impacts;

9. *Recognizes* the importance and value of indigenous, traditional and local knowledge;

10. *Also recognizes* the need to enhance the relevance, usefulness and dissemination of the outputs of the Warsaw International Mechanism to enable Parties and stakeholders to easily use and integrate these outputs into planning and implementing approaches to averting, minimizing and addressing loss and damage;

11. *Encourages* the Executive Committee to communicate its outputs in formats that are easy to translate, adapt and access in different contexts and by different users;

12. *Requests* the Executive Committee to identify modalities for fostering the sharing of relevant knowledge and experience among practitioners and vulnerable countries in an interactive and practical manner;

13. *Encourages* Parties to establish a loss and damage contact point through their respective national focal point;[5]

14. *Invites* Parties to promote coherence in approaches to averting, minimizing and addressing loss and damage when formulating and implementing relevant national plans, strategies and frameworks, and creating enabling environments, including by considering future climate risk, reducing exposure and vulnerability, increasing resilience and coordinated action, and monitoring progress;

15. *Recognizes* the importance of particularly vulnerable developing countries and segments of the population that are already vulnerable owing to geography, socioeconomic status, livelihood, gender, age, indigenous or minority status, or disability, as well as the ecosystems they depend on, in the implementation of the Warsaw International Mechanism;

[3] FCCC/SBI/2019/9, annex I, and FCCC/SBSTA/2019/2, annex.

[4] FCCC/SB/2019/5 and Add.1.

[5] Pursuant to decision 4/CP.22, para. 4(d).

16. *Encourages* the Executive Committee to take into account when updating its five-year rolling workplan areas of work that may require short-, medium- and long-term consideration and efforts, including in relation to sustainable development and transformative change, in the context of the work of each of its thematic expert groups;

17. *Recognizes* the importance of integrating the consideration of approaches to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change into relevant work under and outside the Convention and the Paris Agreement;

18. *Requests* the secretariat, under the guidance of the Executive Committee, to organize meetings in conjunction with relevant regional forums, engaging relevant constituted bodies, networks and work programmes under the Convention and the Paris Agreement, within their respective mandates and workplans and in partnership with relevant organizations, to identify ways of integrating loss and damage into relevant work and guidelines, as appropriate;

19. *Encourages* relevant constituted bodies, networks and work programmes under the Convention and the Paris Agreement, within their respective mandates and workplans and in collaboration with the Executive Committee, to integrate loss and damage, where appropriate, into their work;

20. *Acknowledges* the importance of the involvement of and collaboration with relevant constituted bodies and expert groups, organizations and institutions, under and outside the Convention and the Paris Agreement, to enhance coordination, synergies and linkages;

21. *Requests* the Executive Committee and its thematic expert groups, in undertaking their work, to draw upon the work of and involve, as appropriate, relevant constituted bodies, networks and work programmes, as appropriate;

22. *Encourages* the Executive Committee to draw upon the work, information and expertise of bodies under the Convention and the Paris Agreement, as well as on international processes, such as the 2030 Agenda for Sustainable Development and the Sendai Framework for Disaster Risk Reduction 2015–2030;

23. *Invites* the Executive Committee, acknowledging the need to strengthen risk assessment, to engage relevant experts and collect and disseminate information on methodologies available for integrating long-term assessment, including those associated with the quantification of risks, into comprehensive climate risk management approaches, including national and subnational assessment and planning processes;

24. *Stresses* the importance of enhancing the work on slow onset events and non-economic losses associated with climate change impacts;

25. *Requests* the Executive Committee to revise the terms of reference for and launch the expert groups on slow onset events and non-economic losses, taking into account the broad range of issues covered by the relevant strategic workstreams, which may need to be addressed using a sequential approach;

26. *Also requests* the Executive Committee and its thematic expert groups to develop technical guides within their work on their respective thematic areas, avoiding duplication of work across workstreams, which include sections on the following:

(a) Risk assessments, including long-term risk assessments, of climate change impacts;

(b) Approaches to averting, minimizing and addressing loss and damage associated with the risk assessments referred to in paragraph 26(a) above;

(c) Resources available for supporting such approaches;

(d) Monitoring systems for assessing the effectiveness of these approaches;

27. *Invites* relevant organizations and other stakeholders to collaborate with the Executive Committee, including through strategic partnerships, in developing and disseminating products that support national focal points, loss and damage contact points and other relevant entities in raising awareness of averting, minimizing and addressing loss and damage associated with climate change impacts;

28. *Encourages* the Executive Committee, Parties, relevant constituted bodies and organizations under and outside the Convention and the Paris Agreement and other relevant stakeholders to facilitate or enhance research on, and share good practices for, averting, minimizing and addressing loss and damage, including long-term risk assessment and risk communication;

29. *Requests* the Executive Committee, in collaboration with relevant organizations, to foster public education and awareness-raising efforts at the regional, national and local level, including efforts with a capacity-building component;

30. *Recognizes* the importance of scaling up the mobilization of resources to support efforts to avert, minimize and address loss and damage associated with the adverse effects of climate change;

31. *Also recognizes* the urgency of enhancing the mobilization of action and support, including finance, technology and capacity-building, for developing countries that are particularly vulnerable to the adverse effects of climate change for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change;

32. *Urges* the scaling-up of action and support, as appropriate, including finance, technology and capacity-building, for developing countries that are particularly vulnerable to the adverse effects of climate change for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change;

33. *Also urges* private and non-governmental organizations, funds and other stakeholders to scale up action and support, as appropriate, including finance, technology and capacity-building, for developing countries that are particularly vulnerable to the adverse effects of climate change for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change;

34. *Acknowledges* the wide variety of sources, public and private, bilateral and multilateral, including alternative sources of finance, relevant to supporting approaches to avert, minimize and address loss and damage associated with the adverse effects of climate change;

35. *Urges* the broad range of bodies, organizations and funds under and outside the Convention and the Paris Agreement to scale up support, including finance, technology and capacity-building, for developing countries that are particularly vulnerable to the adverse effects of climate change for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change;

36. *Invites* Parties to make use of available support relevant for averting, minimizing and addressing impacts related to extreme weather events, slow onset events, non-economic losses and human mobility and for comprehensive risk management from a wide variety of sources, public and private, domestic bilateral and multilateral, under and outside the Convention and the Paris Agreement, including through the operating entities of the Financial Mechanism, as appropriate, to the extent consistent with their mandates;

37. *Requests* the Executive Committee to further engage and strengthen its dialogue with the Standing Committee on Finance by providing input in line with decision 2/CP.19, paragraph 5(c)(ii), to the Standing Committee on Finance when, in accordance with its mandate, it provides information, recommendations and draft guidance relating to the operating entities of the financial mechanisms under the Convention and the Paris Agreement, as appropriate;

38. *Takes note* of decision 6/CMA.2, paragraph 8, whereby the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement invited the Board of the Green Climate Fund to continue providing financial resources for activities relevant to averting, minimizing and addressing loss and damage in developing country Parties, to the extent consistent with the existing investment, results framework and funding windows and structures of the Green Climate Fund, and to facilitate efficient access in this regard, and in

this context to take into account the strategic workstreams of the five-year rolling workplan of the Executive Committee;[6]

39. *Requests* the Executive Committee, in collaboration with the Green Climate Fund, as an operating entity of the Financial Mechanism, to clarify how developing country Parties may access funding from the Green Climate Fund for the development of funding proposals related to the strategic workstreams of the five-year rolling workplan of the Executive Committee, consistently with paragraph 38 above, and to include information thereon in its annual reports;

40. *Also requests* the Executive Committee to establish, by the end of 2020, in accordance with its procedures and mandate, an expert group pursuant to decision 2/CP.19, paragraph 5(c), drawing on the work of and involving, as appropriate, existing bodies, organizations, networks and experts under and outside the Convention and the Paris Agreement, ensuring a fair, equitable and balanced representation within the group;

41. *Decides* that the expert group referred to in paragraph 40 above shall develop a focused plan of action, while avoiding duplication of existing efforts, at its first meeting to take place in 2020, on the following:

(a) The activities referred to in paragraphs 37 and 39 above;

(b) The collection, compilation and dissemination of information on the available sources of support under and outside the Convention and the Paris Agreement for activities relevant to averting, minimizing and addressing loss and damage in developing country Parties;

(c) Collaboration with the thematic expert groups of the Executive Committee to undertake the work referred to in paragraph 26 above;

(d) Collaboration with relevant bodies and organizations under and outside the Convention and the Paris Agreement pursuant to decision 2/CP.19, paragraph 5(c)(iii);

(e) The organization of events in conjunction with relevant meetings and conferences, including the NAP Expo and regional events, to share information and experience relating to accessing available sources of support for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, in collaboration with relevant constituted bodies and organizations under and outside the Convention and the Paris Agreement, as appropriate;

(f) The analysis and identification of enabling conditions for effective implementation of risk transfer facilities and social protection schemes in the context of comprehensive risk management, as appropriate;

42. *Recognizes* the importance of building the capacity, and enhancing the facilitation, of the provision of technical support to developing countries for approaches to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change;

43. *Establishes*, as part of the Warsaw International Mechanism, the Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change to catalyse the technical assistance of relevant organizations, bodies, networks and experts for the implementation of relevant approaches at the local, national and regional level in developing countries that are particularly vulnerable to the adverse effects of climate change;

44. *Invites* the organizations, bodies, networks and experts referred to in paragraph 43 above engaged in providing technical assistance to developing countries to report on their progress to the Executive Committee;

45. *Requests* the Executive Committee to include relevant information from the organizations, bodies, networks and experts that have reported on their progress, as referred to in paragraph 44 above, in its annual reports;

[6] FCCC/SB/2017/1/Add.1, annex.

46. *Recommends* that the next review of the Warsaw International Mechanism be held in 2024 and every five years thereafter as follows:

(a) The subsidiary bodies will develop terms of reference for each review at their sessions immediately before the sessions at which they will undertake a review;

(b) The subsidiary bodies will undertake future reviews of the Warsaw International Mechanism and forward the outputs of the reviews to the governing body or bodies;[7]

47. *Notes* that considerations related to the governance of the Warsaw International Mechanism will continue at its third session (November 2020);[8]

48. *Encourages* Parties to make available sufficient resources for the successful and timely implementation of the five-year rolling workplan of the Executive Committee;

49. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in this decision;

50. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

8th plenary meeting
15 December 2019

[7] Pending the outcome of future discussions on this matter as per para. 47 as well as decision 2/CP.25, para. 2. Nothing in this decision prejudices Parties' views or prejudges outcomes on matters related to the governance of the Warsaw International Mechanism.

[8] It is noted that discussions related to the governance of the Warsaw International Mechanism did not produce an outcome; this is without prejudice to further consideration of this matter.

Decision 1/CMA.3

Glasgow Climate Pact

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling Article 2 of the Paris Agreement,

Also recalling decisions 3/CMA.1 and 1/CMA.2,

Noting decision 1/CP.26,

Recognizing the role of multilateralism in addressing climate change and promoting regional and international cooperation in order to strengthen climate action in the context of sustainable development and efforts to eradicate poverty,

Acknowledging the devastating impacts of the coronavirus disease 2019 pandemic and the importance of ensuring a sustainable, resilient and inclusive global recovery, showing solidarity particularly with developing country Parties,

Also acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity,

Noting the importance of ensuring the integrity of all ecosystems, including in forests, the ocean and the cryosphere, and the protection of biodiversity, recognized by some cultures as Mother Earth, and *also noting* the importance for some of the concept of 'climate justice', when taking action to address climate change,

Expressing appreciation to the Heads of State and Government who participated in the World Leaders Summit in Glasgow and for the increased targets and actions announced and the commitments made to work together and with non-Party stakeholders to accelerate sectoral action by 2030,

Recognizing the important role of indigenous peoples, local communities and civil society, including youth and children, in addressing and responding to climate change and *highlighting* the urgent need for multilevel and cooperative action,

I. Science and urgency

1. *Recognizes* the importance of the best available science for effective climate action and policymaking;

2. *Welcomes* the contribution of Working Group I to the Intergovernmental Panel on Climate Change Sixth Assessment Report[1] and the recent global and regional reports on the state of the climate from the World Meteorological Organization and *invites* the Intergovernmental Panel on Climate Change to present its forthcoming reports to the Subsidiary Body for Scientific and Technological Advice in 2022;

3. *Expresses alarm and utmost concern* that human activities have caused around 1.1 °C of warming to date, that impacts are already being felt in every region and that carbon budgets consistent with achieving the Paris Agreement temperature goal are now small and being rapidly depleted;

[1] Intergovernmental Panel on Climate Change. 2021. *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. V Masson-Delmotte, P Zhai, A Pirani, et al. (eds.). Cambridge: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg1/.

4. *Recalls* Article 2, paragraph 2, of the Paris Agreement, which provides that the Paris Agreement will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities in the light of different national circumstances;

5. *Stresses* the urgency of enhancing ambition and action in relation to mitigation, adaptation and finance in this critical decade to address the gaps in the implementation of the goals of the Paris Agreement;

II. Adaptation

6. *Notes with serious concern* the findings from the contribution of Working Group I to the Intergovernmental Panel on Climate Change Sixth Assessment Report, including that climate and weather extremes and their adverse impacts on people and nature will continue to increase with every additional increment of rising temperatures;

7. *Emphasizes* the urgency of scaling up action and support, including finance, capacity-building and technology transfer, to enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change in line with the best available science, taking into account the priorities and needs of developing country Parties;

8. *Welcomes* the adaptation communications and national adaptation plans submitted to date, which enhance the understanding and implementation of adaptation actions and priorities;

9. *Urges* Parties to further integrate adaptation into local, national and regional planning;

10. *Requests* Parties that have not yet done so to submit their adaptation communications in accordance with decision 9/CMA.1 ahead of the fourth session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (November 2022) so as to provide timely input to the global stocktake;

11. *Recognizes* the importance of the global goal on adaptation for the effective implementation of the Paris Agreement and *welcomes* the launch of the comprehensive two-year Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation;

12. *Notes* that the implementation of the Glasgow–Sharm el-Sheikh work programme will start immediately after the third session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

13. *Invites* the Intergovernmental Panel on Climate Change to present to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its fourth session the findings from the contribution of Working Group II to its Sixth Assessment Report, including those relevant to assessing adaptation needs, and *calls upon* the research community to further the understanding of global, regional and local impacts of climate change, response options and adaptation needs;

III. Adaptation finance

14. *Notes with concern* that the current provision of climate finance for adaptation remains insufficient to respond to worsening climate change impacts in developing country Parties;

15. *Urges* developed country Parties to urgently and significantly scale up their provision of climate finance, technology transfer and capacity-building for adaptation so as to respond to the needs of developing country Parties as part of a global effort, including for the formulation and implementation of national adaptation plans and adaptation communications;

16. *Recognizes* the importance of the adequacy and predictability of adaptation finance, including the value of the Adaptation Fund in delivering dedicated support for adaptation, and *invites* developed country Parties to consider multi-annual pledges;

17. *Welcomes* the recent pledges made by many developed country Parties to increase their provision of climate finance to support adaptation in developing country Parties in response to their growing needs, including contributions made to the Adaptation Fund and the Least Developed Countries Fund, which represent significant progress compared with previous efforts;

18. *Urges* developed country Parties to at least double their collective provision of climate finance for adaptation to developing country Parties from 2019 levels by 2025, in the context of achieving a balance between mitigation and adaptation in the provision of scaled-up financial resources, recalling Article 9, paragraph 4, of the Paris Agreement;

19. *Calls upon* multilateral development banks, other financial institutions and the private sector to enhance finance mobilization in order to deliver the scale of resources needed to achieve climate plans, particularly for adaptation, and *encourages* Parties to continue to explore innovative approaches and instruments for mobilizing finance for adaptation from private sources;

IV. Mitigation

20. *Reaffirms* the Paris Agreement temperature goal of holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels;

21. *Recognizes* that the impacts of climate change will be much lower at the temperature increase of 1.5 °C compared with 2 °C and *resolves* to pursue efforts to limit the temperature increase to 1.5 °C;

22. *Recognizes* that limiting global warming to 1.5 °C requires rapid, deep and sustained reductions in global greenhouse gas emissions, including reducing global carbon dioxide emissions by 45 per cent by 2030 relative to the 2010 level and to net zero around mid-century as well as deep reductions in other greenhouse gases;

23. *Also recognizes* that this requires accelerated action in this critical decade, on the basis of the best available scientific knowledge and equity, reflecting common but differentiated responsibilities and respective capabilities in the light of different national circumstances and in the context of sustainable development and efforts to eradicate poverty;

24. *Welcomes* efforts by Parties to communicate new or updated nationally determined contributions, long-term low greenhouse gas emission development strategies and other actions that demonstrate progress towards achievement of the Paris Agreement temperature goal;

25. *Notes with serious concern* the findings of the synthesis report on nationally determined contributions under the Paris Agreement,[2] according to which the aggregate greenhouse gas emission level, taking into account implementation of all submitted nationally determined contributions, is estimated to be 13.7 per cent above the 2010 level in 2030;

26. *Emphasizes* the urgent need for Parties to increase their efforts to collectively reduce emissions through accelerated action and implementation of domestic mitigation measures in accordance with Article 4, paragraph 2, of the Paris Agreement;

27. *Decides* to establish a work programme to urgently scale up mitigation ambition and implementation in this critical decade and *requests* the Subsidiary Body for Implementation and the Subsidiary Body for Scientific and Technological Advice to recommend a draft decision on this matter for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its fourth session, in a manner that complements the global stocktake;

[2] See document FCCC/PA/CMA/2021/8/Rev.1 and https://unfccc.int/sites/default/files/resource/message_to_parties_and_observers_on_ndc_numbers.pdf.

28. *Urges* Parties that have not yet communicated new or updated nationally determined contributions to do so as soon as possible in advance of the fourth session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

29. *Recalls* Article 3 and Article 4, paragraphs 3, 4, 5 and 11, of the Paris Agreement and *requests* Parties to revisit and strengthen the 2030 targets in their nationally determined contributions as necessary to align with the Paris Agreement temperature goal by the end of 2022, taking into account different national circumstances;

30. *Also requests* the secretariat to annually update the synthesis report on nationally determined contributions under the Paris Agreement, referred to in decision 1/CMA.2, paragraph 10, to be made available to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at each of its sessions;

31. *Decides* to convene an annual high-level ministerial round table on pre-2030 ambition, beginning at the fourth session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

32. *Urges* Parties that have not yet done so to communicate, by the fourth session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement, long-term low greenhouse gas emission development strategies referred to in Article 4, paragraph 19, of the Paris Agreement towards just transitions to net zero emissions by or around mid-century, taking into account different national circumstances;

33. *Invites* Parties to update the strategies referred to in paragraph 32 above regularly, as appropriate, in line with the best available science;

34. *Requests* the secretariat to prepare a synthesis report on long-term low greenhouse gas emission development strategies referred to in Article 4, paragraph 19, of the Paris Agreement to be made available to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its fourth session;

35. *Notes* the importance of aligning nationally determined contributions with long-term low greenhouse gas emission development strategies;

36. *Calls upon* Parties to accelerate the development, deployment and dissemination of technologies, and the adoption of policies, to transition towards low-emission energy systems, including by rapidly scaling up the deployment of clean power generation and energy efficiency measures, including accelerating efforts towards the phasedown of unabated coal power and phase-out of inefficient fossil fuel subsidies, while providing targeted support to the poorest and most vulnerable in line with national circumstances and recognizing the need for support towards a just transition;

37. *Invites* Parties to consider further actions to reduce by 2030 non-carbon dioxide greenhouse gas emissions, including methane;

38. *Emphasizes* the importance of protecting, conserving and restoring nature and ecosystems to achieve the Paris Agreement temperature goal, including through forests and other terrestrial and marine ecosystems acting as sinks and reservoirs of greenhouse gases and by protecting biodiversity, while ensuring social and environmental safeguards;

39. *Recognizes* that enhanced support for developing country Parties will allow for higher ambition in their actions;

V. Finance, technology transfer and capacity-building for mitigation and adaptation

40. *Urges* developed country Parties to provide enhanced support, including through financial resources, technology transfer and capacity-building, to assist developing country Parties with respect to both mitigation and adaptation, in continuation of their existing obligations under the Convention and the Paris Agreement, and *encourages* other Parties to provide or continue to provide such support voluntarily;

41. *Notes with concern* the growing needs of developing country Parties, in particular due to the increasing impacts of climate change and increased indebtedness as a consequence of the coronavirus disease 2019 pandemic;

42. *Welcomes* the first report on the determination of needs of developing country Parties related to implementing the Convention and the Paris Agreement[3] and the fourth Biennial Assessment and Overview of Climate Finance Flows[4] by the Standing Committee on Finance;

43. *Emphasizes* the need to mobilize climate finance from all sources to reach the level needed to achieve the goals of the Paris Agreement, including significantly increasing support for developing country Parties, beyond USD 100 billion per year;

44. *Notes with deep regret* that the goal of developed country Parties to mobilize jointly USD 100 billion per year by 2020 in the context of meaningful mitigation actions and transparency on implementation has not yet been met and *welcomes* the increased pledges made by many developed country Parties and the *Climate Finance Delivery Plan: Meeting the US$100 Billion Goal*[5] and the collective actions contained therein;

45. *Calls upon* developed country Parties to provide greater clarity on their pledges referred to in paragraph 44 above through their next biennial communications under Article 9, paragraph 5, of the Paris Agreement;

46. *Urges* developed country Parties to fully deliver on the USD 100 billion goal urgently and through to 2025 and *emphasizes* the importance of transparency in the implementation of their pledges;

47. *Urges* the operating entities of the Financial Mechanism, multilateral development banks and other financial institutions to further scale up investments in climate action and *calls for* a continued increase in the scale and effectiveness of climate finance from all sources globally, including grants and other highly concessional forms of finance;

48. *Re-emphasizes* the need for scaled-up financial resources to take into account the needs of those countries particularly vulnerable to the adverse effects of climate change and in this regard *encourages* relevant multilateral institutions to consider how climate vulnerabilities should be reflected in the provision and mobilization of concessional financial resources and other forms of support, including special drawing rights;

49. *Welcomes with appreciation* the initiation of deliberations on a new collective quantified goal on climate finance and *looks forward* to the ad hoc work programme established under decision 9/CMA.3 and to engaging constructively in the actions contained therein;

50. *Underscores* the importance of the deliberations referred to in paragraph 49 above being informed by the need to strengthen the global response to the threat of climate change in the context of sustainable development and efforts to eradicate poverty and to make finance flows consistent with a pathway towards low greenhouse gas emission and climate-resilient development taking into account the needs and priorities of developing countries and building on the work of the Standing Committee on Finance;

51. *Emphasizes* the challenges faced by many developing country Parties in accessing finance and *encourages* further efforts to enhance access to finance, including by the operating entities of the Financial Mechanism;

52. *Notes* the specific concerns raised with regard to eligibility and ability to access concessional forms of climate finance and *re-emphasizes* the importance of the provision of scaled-up financial resources, taking into account the needs of developing country Parties that are particularly vulnerable to the adverse effects of climate change;

[3] See document FCCC/CP/2021/10/Add.2–FCCC/PA/CMA/2021/7/Add.2.
[4] See document FCCC/CP/2021/10/Add.1–FCCC/PA/CMA/2021/7/Add.1.
[5] See https://ukcop26.org/wp-content/uploads/2021/10/Climate-Finance-Delivery-Plan-1.pdf.

53. *Encourages* relevant providers of financial support to consider how vulnerability to the adverse effects of climate change could be reflected in the provision and mobilization of concessional financial resources and how they could simplify and enhance access to finance;

54. *Underscores* the urgency of enhancing understanding and action to make finance flows consistent with a pathway towards low greenhouse gas emission and climate-resilient development in a transparent and inclusive manner in the context of sustainable development and poverty eradication;

55. *Calls upon* developed country Parties, multilateral development banks and other financial institutions to accelerate the alignment of their financing activities with the goals of the Paris Agreement;

56. *Acknowledges* the progress made on capacity-building, particularly in relation to enhancing the coherence and coordination of capacity-building activities towards the implementation of the Convention and the Paris Agreement;

57. *Recognizes* the need to continue supporting developing country Parties in identifying and addressing both current and emerging capacity-building gaps and needs, and to catalyse climate action and solutions to respond;

58. *Welcomes* the outcomes of the "COP26 Catalyst for Climate Action" and the strong commitments made by many Parties to take forward action on capacity-building;

59. *Also welcomes* the joint annual reports of the Technology Executive Committee and the Climate Technology Centre and Network for 2020 and 2021[6] and *invites* the two bodies to strengthen their collaboration;

60. *Emphasizes* the importance of strengthening cooperative action on technology development and transfer for the implementation of mitigation and adaptation action, including accelerating, encouraging and enabling innovation, and the importance of predictable, sustainable and adequate funding from diverse sources for the Technology Mechanism;

VI. Loss and damage[7]

61. *Acknowledges* that climate change has already caused and will increasingly cause loss and damage and that, as temperatures rise, impacts from climate and weather extremes, as well as slow onset events, will pose an ever-greater social, economic and environmental threat;

62. *Also acknowledges* the important role of a broad range of stakeholders at the local, national and regional level, including indigenous peoples and local communities, in averting, minimizing and addressing loss and damage associated with the adverse effects of climate change;

63. *Reiterates* the urgency of scaling up action and support, as appropriate, including finance, technology transfer and capacity-building, for implementing approaches for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change in developing country Parties that are particularly vulnerable to these effects;

64. *Urges* developed country Parties, the operating entities of the Financial Mechanism, United Nations entities and intergovernmental organizations and other bilateral and multilateral institutions, including non-governmental organizations and private sources, to provide enhanced and additional support for activities addressing loss and damage associated with the adverse effects of climate change;

[6] FCCC/SB/2020/4 and FCCC/SB/2021/5.

[7] It is noted that discussions related to the governance of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts did not produce an outcome; this is without prejudice to further consideration of this matter.

65. *Recognizes* the importance of demand-driven technical assistance in building capacity to implement approaches to avert, minimize and address loss and damage associated with the adverse effects of climate change;

66. *Welcomes* the further operationalization of the Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including the agreement on its functions and process for further developing its institutional arrangements;

67. *Decides* that the Santiago network will be provided with funds to support technical assistance for the implementation of relevant approaches to avert, minimize and address loss and damage associated with the adverse effects of climate change in developing countries in support of the functions set out in paragraph 9 of decision 19/CMA.3;

68. *Also decides* that the modalities for the management of funds provided for technical assistance under the Santiago network and the terms for their disbursement shall be determined by the process set out in paragraph 10 of decision 19/CMA.3;

69. *Further decides* that the body providing secretarial services to facilitate work under the Santiago network to be determined in accordance with paragraph 10 of decision 19/CMA.3 will administer the funds referred to in paragraph 67 above;

70. *Urges* developed country Parties to provide funds for the operation of the Santiago network and for the provision of technical assistance as set out in paragraph 67 above;

71. *Acknowledges* the importance of coherent action to respond to the scale of needs caused by the adverse impacts of climate change;

72. *Resolves* to strengthen partnerships between developing and developed countries, funds, technical agencies, civil society and communities to enhance understanding of how approaches to averting, minimizing and addressing loss and damage can be improved;

73. *Decides* to establish the Glasgow Dialogue between Parties, relevant organizations and stakeholders to discuss the arrangements for the funding of activities to avert, minimize and address loss and damage associated with the adverse impacts of climate change, to take place each year at the first session of the Subsidiary Body for Implementation until it is concluded at its sixtieth session (June 2024);

74. *Requests* the Subsidiary Body for Implementation to organize the Glasgow Dialogue in cooperation with the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts;

VII. Implementation

75. *Resolves* to move swiftly with the full implementation of the Paris Agreement;

76. *Welcomes* the start of the global stocktake and *expresses its determination* for the process to be comprehensive, inclusive and consistent with Article 14 of the Paris Agreement and decision 19/CMA.1, in the light of paragraph 5 above;

77. *Encourages* the high-level champions to support the effective participation of non-Party stakeholders in the global stocktake;

78. *Recalls* the Katowice climate package and *welcomes with appreciation* the completion of the Paris Agreement work programme, including the adoption of decisions on the following:

(a) Common time frames for nationally determined contributions referred to in Article 4, paragraph 10, of the Paris Agreement (decision 6/CMA.3);

(b) Methodological issues relating to the enhanced transparency framework for action and support referred to in Article 13 of the Paris Agreement (decision 5/CMA.3);

(c) Modalities and procedures for the operation and use of a public registry referred to in Article 4, paragraph 12, of the Paris Agreement (decision 20/CMA.3);

(d) Modalities and procedures for the operation and use of a public registry referred to in Article 7, paragraph 12, of the Paris Agreement (decision 21/CMA.3);

(e) Guidance on cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement (decision 2/CMA.3);

(f) Rules, modalities and procedures for the mechanism established by Article 6, paragraph 4, of the Paris Agreement (decision 3/CMA.3);

(g) Work programme under the framework for non-market approaches referred to in Article 6, paragraph 8, of the Paris Agreement (decision 4/CMA.3);

79. *Urges* Parties to swiftly make the necessary preparations for ensuring timely reporting under the enhanced transparency framework in line with Article 13 of the Paris Agreement and the timelines set out in decision 18/CMA.1;

80. *Acknowledges* the call from developing countries for increased support for the implementation of the enhanced transparency framework under Article 13 of the Paris Agreement in a timely, adequate and predictable manner;

81. *Welcomes* decision 7/CP.26, in which the Global Environment Facility is encouraged, as part of the eighth replenishment process, to duly consider ways to increase the financial resources allocated for climate, and *recognizes* that the Capacity-building Initiative for Transparency, established pursuant to decision 1/CP.21, paragraph 84, will continue to support developing country Parties, upon their request, in building their institutional and technical capacity in relation to the enhanced transparency framework;

82. *Welcomes* decision 12/CMA.3, in which the Global Environment Facility is requested to continue to facilitate improved access to the Capacity-building Initiative for Transparency by developing country Parties, and *encourages* the Global Environment Facility to work closely with other institutions and initiatives to enhance these efforts, such as the Taskforce on Access to Climate Finance and the "COP26 Catalyst for Climate Action";

83. *Takes note* of the revised terms of reference of the Consultative Group of Experts, contained in the annex to decision 14/CP.26;

84. *Recognizes* the need to take into consideration the concerns of Parties with economies most affected by the impacts of response measures, particularly developing country Parties, in line with Article 4, paragraph 15, of the Paris Agreement;

85. *Also recognizes* the need to ensure just transitions that promote sustainable development and eradication of poverty, and the creation of decent work and quality jobs, including through making financial flows consistent with a pathway towards low greenhouse gas emission and climate-resilient development, including through deployment and transfer of technology, and provision of support to developing country Parties;

VIII. Collaboration

86. *Notes* the urgent need to close the gaps in implementation towards the goals of the Paris Agreement and *invites* the Secretary-General of the United Nations to convene world leaders in 2023 to consider ambition to 2030;

87. *Recognizes* the importance of international collaboration on innovative climate action, including technological advancement, across all actors of society, sectors and regions, in contributing to progress towards the goals of the Paris Agreement;

88. *Also recognizes* the important role of non-Party stakeholders, including civil society, indigenous peoples, local communities, youth, children, local and regional governments and other stakeholders, in contributing to progress towards the goals of the Paris Agreement;

89. *Welcomes* the improvement of the Marrakech Partnership for Global Climate Action[8] for enhancing ambition, the leadership and actions of the high-level champions, and the work

[8] See https://unfccc.int/sites/default/files/resource/Improved%20Marrakech%20Partnership%202021-2025.pdf.

of the secretariat on the Non-State Actor Zone for Climate Action platform to support accountability and track progress of voluntary initiatives;

90. *Also welcomes* the high-level communiqué[9] on the regional climate weeks and *encourages* the continuation of regional climate weeks where Parties and non-Party stakeholders can strengthen their credible and durable response to climate change at the regional level;

91. *Urges* Parties to swiftly begin implementing the Glasgow work programme on Action for Climate Empowerment, respecting, promoting and considering their respective obligations on human rights as well as gender equality and empowerment of women;

92. *Also urges* Parties and stakeholders to ensure meaningful youth participation and representation in multilateral, national and local decision-making processes, including under the Paris Agreement;

93. *Emphasizes* the important role of indigenous peoples' and local communities' culture and knowledge in effective action on climate change and *urges* Parties to actively involve indigenous peoples and local communities in designing and implementing climate action;

94. *Expresses its recognition* of the important role observer organizations play, including the nine non-governmental organization constituencies, in sharing their knowledge, and their calls to see ambitious action to meet the goals of the Paris Agreement and in collaborating with Parties to that end;

95. *Encourages* Parties to increase the full, meaningful and equal participation of women in climate action and to ensure gender-responsive implementation and means of implementation, which are vital for raising ambition and achieving climate goals;

96. *Takes note* of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in this decision;

97. *Requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

12th plenary meeting
13 November 2021

[9] Available at https://unfccc.int/regional-climate-weeks/rcw-2021-cop26-communique.

Decision 1/CMA.4

Sharm el-Sheikh Implementation Plan

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling Article 2 of the Paris Agreement,

Also recalling decisions 3/CMA.1, 4/CMA.1 and 1/CMA.2,

Noting decision 1/CP.27,

Being guided by science and principles,

Recalling Article 2, paragraph 1, of the Paris Agreement, which provides that the Agreement, in enhancing the implementation of the Convention, aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty,

Also recalling Article 2, paragraph 2, of the Paris Agreement, which provides that the Agreement will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances,

Reaffirming the outcomes of all previous sessions of the Conferences of the Parties, Conferences of the Parties serving as the meeting of the Parties to the Kyoto Protocol and Conferences of the Parties serving as the meeting of the Parties to the Paris Agreement, including decisions 1/CP.26, 1/CMP.16 and 1/CMA.3 (the Glasgow Climate Pact),

Also reaffirming the critical role of multilateralism based on United Nations values and principles, including in the context of the implementation of the Convention and the Paris Agreement, and the importance of international cooperation for addressing global issues, including climate change, in the context of sustainable development and efforts to eradicate poverty,

Noting the importance of transitioning to sustainable lifestyles and sustainable patterns of consumption and production in efforts to address climate change,

Also noting the importance of pursuing an approach to education that promotes a shift in lifestyles while fostering patterns of development and sustainability based on care, community and cooperation,

Acknowledging that climate change is a common concern of humankind and that Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to a clean, healthy and sustainable environment, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity,

Noting the importance of ensuring the integrity of all ecosystems, including in forests, the ocean and the cryosphere, and the protection of biodiversity, recognized by some cultures as Mother Earth, and *also noting* the importance of ‘climate justice’, when taking action to address climate change,

Emphasizing that enhanced effective climate action should be implemented in a manner that is just and inclusive while minimizing negative social or economic impacts that may arise from climate action,

Recognizing the fundamental priority of safeguarding food security and ending hunger, and the particular vulnerabilities of food production systems to the adverse impacts of climate change,

Also recognizing the critical role of protecting, conserving and restoring water systems and water-related ecosystems in delivering climate adaptation benefits and co-benefits, while ensuring social and environmental safeguards,

1. *Underlines* the urgent need to address, in a comprehensive and synergetic manner, the interlinked global crises of climate change and biodiversity loss in the broader context of achieving the Sustainable Development Goals, as well as the vital importance of protecting, conserving, restoring and sustainably using nature and ecosystems for effective and sustainable climate action;

2. *Acknowledges* that the impacts of climate change exacerbate the global energy and food crises, and vice versa, particularly in developing countries;

3. *Stresses* that the increasingly complex and challenging global geopolitical situation and its impact on the energy, food and economic situations, as well as the additional challenges associated with the socioeconomic recovery from the coronavirus disease 2019 pandemic, should not be used as a pretext for backtracking, backsliding or de-prioritizing climate action;

I. Science and urgency

4. *Welcomes* the contributions of Working Groups II[1] and III[2] to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change;

5. *Recognizes* the importance of the best available science for effective climate action and policymaking;

6. *Takes note* of the 2022 adaptation gap[3] and emissions gap[4] reports of the United Nations Environment Programme, and recent global and regional reports of the World Meteorological Organization on the state of the climate;[5]

7. *Reaffirms* the Paris Agreement temperature goal of holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;

8. *Reiterates* that the impacts of climate change will be much lower at the temperature increase of 1.5 °C compared with 2 °C[6] and *resolves* to pursue further efforts to limit the temperature increase to 1.5 °C;

9. *Recognizes* the impacts of climate change on the cryosphere and the need for further understanding of these impacts, including of tipping points;

[1] Intergovernmental Panel on Climate Change. 2022. *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. H Pörtner, D Roberts, M Tignor, et al. (eds.). Cambridge: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg2/.

[2] Intergovernmental Panel on Climate Change. 2022. *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. P Shukla, J Skea, R Slade, et al. (eds.). Cambridge and New York: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg3/.

[3] See United Nations Environment Programme. 2022. *Adaptation Gap Report 2022: Too Little, Too Slow - Climate adaptation failure puts world at risk*. Nairobi: United Nations Environment Programme. Available at https://www.unep.org/resources/adaptation-gap-report-2022.

[4] See United Nations Environment Programme. 2022. *Emissions Gap Report 2022: The Closing Window – Climate crisis calls for rapid transformation of societies*. Nairobi: United Nations Environment Programme. Available at https://www.unep.org/resources/emissions-gap-report-2022.

[5] See, for example, World Meteorological Organization. 2022. *State of the Global Climate 2021*. Geneva: World Meteorological Organization. Available at https://library.wmo.int/index.php?lvl=notice_display&id=22080#.Y5cGUHbMKUk.

[6] Decision 1/CP.26, para. 16, and decision 1/CMA.3, para. 21.

II. Enhancing ambition and implementation

10. *Resolves* to implement ambitious, just, equitable and inclusive transitions to low-emission and climate-resilient development in line with the principles and objectives of the Convention, the Kyoto Protocol and the Paris Agreement, taking into account this decision, the Glasgow Climate Pact and other relevant decisions of the Conference of the Parties and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;

11. *Expresses appreciation* to the Heads of State and Government who participated in the Sharm el-Sheikh Climate Implementation Summit for their support in enhancing and accelerating the implementation of climate action;

III. Energy

12. *Emphasizes* the urgent need for immediate, deep, rapid and sustained reductions in global greenhouse gas emissions by Parties across all applicable sectors, including through increasing the use of low-emission and renewable energy, just energy transition partnerships and other cooperative actions;

13. *Recognizes* that the unprecedented global energy crisis underlines the urgency to rapidly transform energy systems to be more secure, reliable and resilient, including by accelerating clean and just transitions to renewable energy during this critical decade of action;

14. *Stresses* the importance of enhancing a clean energy mix, including low-emission and renewable energy, at all levels as part of diversifying energy mixes and systems, in line with national circumstances and recognizing the need for support towards just transitions;

IV. Mitigation

15. *Recognizes* that limiting global warming to 1.5 °C requires rapid, deep and sustained reductions in global greenhouse gas emissions of 43 per cent by 2030 relative to the 2019 level;

16. *Also recognizes* that this requires accelerated action in this critical decade, on the basis of equity and the best available scientific knowledge, reflecting common but differentiated responsibilities and respective capabilities, in the light of different national circumstances and in the context of sustainable development and efforts to eradicate poverty;

17. *Commends* efforts by Parties to communicate new or updated nationally determined contributions, long-term low greenhouse gas emission development strategies and other actions that demonstrate progress towards achieving the Paris Agreement temperature goal;

18. *Welcomes* the organization of, and *takes note* of the discussions at, the first annual high-level ministerial round table on pre-2030 ambition,[7] held on 14 November 2022;

19. *Welcomes* the adoption of decision 4/CMA.4 on the mitigation work programme, which aims to urgently scale up mitigation ambition and implementation;

20. *Notes with serious concern* the finding in the latest synthesis report[8] on nationally determined contributions that the total global greenhouse gas emission level in 2030, taking into account implementation of all latest nationally determined contributions, is estimated to be 0.3 per cent below the 2019 level, which is not in line with least-cost scenarios for keeping global temperature rise to 2 or 1.5 °C;

21. *Emphasizes* the urgent need for Parties to increase their efforts to collectively reduce emissions through accelerated action and implementation of domestic mitigation measures in accordance with Article 4, paragraph 2, of the Paris Agreement;

[7] Decision 1/CMA.3, para. 32.
[8] FCCC/PA/CMA/2022/4.

22. *Urges* Parties that have not yet communicated new or updated nationally determined contributions to do so as soon as possible in advance of the fifth session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (November–December 2023);

23. *Recalls* Article 3 and Article 4, paragraphs 3, 4, 5 and 11, of the Paris Agreement and *requests* Parties that have not yet done so to revisit and strengthen the 2030 targets in their nationally determined contributions as necessary to align with the Paris Agreement temperature goal by the end of 2023, taking into account different national circumstances;

24. *Urges* Parties that have not yet done so to communicate, by the fifth session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement, long-term low greenhouse gas emission development strategies referred to in Article 4, paragraph 19, of the Paris Agreement towards just transitions to net zero emissions by or around mid-century, taking into account different national circumstances;

25. *Reiterates*[9] its invitation to Parties to update the strategies referred to in paragraph 24 above regularly, as appropriate, in line with the best available science;

26. *Requests* the secretariat to prepare a synthesis report on long-term low greenhouse gas emission development strategies referred to in Article 4, paragraph 19, of the Paris Agreement for consideration by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its fifth session;

27. *Notes* the importance of aligning nationally determined contributions with long-term low greenhouse gas emission development strategies;

28. *Calls upon* Parties to accelerate the development, deployment and dissemination of technologies, and the adoption of policies, to transition towards low-emission energy systems, including by rapidly scaling up the deployment of clean power generation and energy efficiency measures, including accelerating efforts towards the phasedown of unabated coal power and phase-out of inefficient fossil fuel subsidies, while providing targeted support to the poorest and most vulnerable in line with national circumstances and recognizing the need for support towards a just transition;

29. *Reiterates*[10] its invitation to Parties to consider further actions to reduce by 2030 non-carbon dioxide greenhouse gas emissions, including methane;

30. *Emphasizes* the importance of protecting, conserving and restoring nature and ecosystems to achieve the Paris Agreement temperature goal, including through forests and other terrestrial and marine ecosystems acting as sinks and reservoirs of greenhouse gases and by protecting biodiversity, while ensuring social and environmental safeguards;

31. *Recognizes* the importance of maximizing the positive and minimizing the negative economic and social impacts of the implementation of response measures and *welcomes* the adoption of decisions 20/CP.27, 7/CMP.17 and 23/CMA.4;

32. *Emphasizes* Article 4, paragraph 5, of the Paris Agreement, which provides that support shall be provided to developing country Parties for the implementation of Article 4 of the Paris Agreement, in accordance with Articles 9–11, and *recognizes* that enhanced support for developing country Parties will allow for higher ambition in their actions;

V. Adaptation

33. *Notes with serious concern* the existing gap between current levels of adaptation and levels needed to respond to the adverse effects of climate change in line with findings from the contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change;

[9] Decision 1/CMA.3, para. 33.
[10] Decision 1/CMA.3, para. 37.

34. *Urges* Parties to adopt a transformational approach to enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change;

35. *Also urges* developed country Parties to urgently and significantly scale up their provision of climate finance, technology transfer and capacity-building for adaptation so as to respond to the needs of developing country Parties as part of a global effort, including for the formulation and implementation of national adaptation plans and adaptation communications;

36. *Recognizes* the importance of the global goal on adaptation for the effective implementation of the Paris Agreement and *recalls* decision 7/CMA.3, whereby the Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation was established and launched;

37. *Welcomes* the progress made in the first year of the two-year Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation outlined in the report on the workshops held under the work programme,[11] *looks forward* to the conclusion of the work programme at the fifth session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement and *welcomes* the robust programme of work for 2023 set out in decision 3/CMA.4;

38. *Stresses* the urgency of fulfilling the mandate of having a clear framework for the global goal on adaptation to guide the effective implementation of Article 7 of the Paris Agreement;

39. *Recognizes* that the global goal on adaptation will contribute to reducing the risk of climate change impacts in the context of the long-term temperature goal set out in Article 2, paragraph 1(a), of the Paris Agreement, in line with different national circumstances, needs and priorities and in the context of sustainable development and poverty eradication;

40. *Also recognizes* the centrality of the role of the Adaptation Fund in the climate finance architecture, *welcomes* the new pledges made at this session, *urges* all contributors to fulfil their pledges in a timely manner and *invites* the contributors to ensure the sustainability of the resources of the Fund;

41. *Highlights* the role of the Least Developed Countries Fund and the Special Climate Change Fund in supporting actions by developing countries to address climate change, *welcomes* the pledges made to the two Funds and *invites* developed countries to further contribute to the two Funds;

42. *Requests* the Standing Committee on Finance to prepare a report on the doubling of adaptation finance, in line with paragraph 18 of decision 1/CMA.3, for consideration by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its fifth session;

43. *Emphasizes* the importance of protecting, conserving and restoring water and water-related ecosystems, including river basins, aquifers and lakes, and *urges* Parties to further integrate water into adaptation efforts;

VI. Loss and damage

44. *Notes with grave concern*, according to information in the contributions of Working Groups II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, the growing gravity, scope and frequency in all regions of loss and damage associated with the adverse effects of climate change, resulting in devastating economic and non-economic losses, including forced displacement and impacts on cultural heritage, human mobility and the lives and livelihoods of local communities, and *underlines* the importance of an adequate and effective response to loss and damage;

[11] FCCC/SB/2022/INF.2.

45. *Expresses deep concern* regarding the significant financial costs associated with loss and damage for developing countries, resulting in a growing debt burden and impairing the realization of the Sustainable Development Goals;

46. *Welcomes* the consideration, for the first time, of matters relating to funding arrangements responding to loss and damage associated with the adverse effects of climate change, including a focus on addressing loss and damage, under the Conference of the Parties and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement and *also welcomes* the adoption of decisions 2/CP.27 and 2/CMA.4, on matters relating to funding arrangements responding to loss and damage associated with the adverse effects of climate change;

47. *Further welcomes* the adoption of decisions 11/CP.27 and 12/CMA.4, establishing the institutional arrangements of the Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change to enable its full operationalization, including supporting its mandated role in catalysing technical assistance for the implementation of the relevant approaches at the local, national and regional level in developing countries that are particularly vulnerable to the adverse effects of climate change, and *affirms* its determination to select the host of the secretariat of the Santiago network by 2023 through a selection process conducted in an open, transparent, fair and neutral manner in accordance with the process outlined in paragraphs 19–23 of the decisions referred to above;

VII. Early warning and systematic observation

48. *Emphasizes* the need to address existing gaps in the Global Climate Observing System, particularly in developing countries, and *recognizes* that one third of the world, including 60 per cent of Africa, does not have access to early warning and climate information services, as well as the need to enhance coordination of activities by the systematic observation community and the ability to provide useful and actionable climate information for mitigation, adaptation and early warning systems, as well as information to enable understanding of adaptation limits and of attribution of extreme events;

49. *Welcomes* and *reiterates* the United Nations Secretary-General's call made on World Meteorological Day on 23 March 2022 to protect everyone on Earth through universal coverage of early warning systems against extreme weather and climate change within the next five years and *invites* development partners, international financial institutions and the operating entities of the Financial Mechanism to provide support for implementation of the Early Warnings for All initiative;

VIII. Implementation – pathways to just transition

50. *Affirms* that sustainable and just solutions to the climate crisis must be founded on meaningful and effective social dialogue and participation of all stakeholders and *notes* that the global transition to low emissions provides opportunities and challenges for sustainable economic development and poverty eradication;

51. *Emphasizes* that just and equitable transition encompasses pathways that include energy, socioeconomic, workforce and other dimensions, all of which must be based on nationally defined development priorities and include social protection so as to mitigate potential impacts associated with the transition, and *highlights* the important role of the instruments related to social solidarity and protection in mitigating the impacts of applied measures;

52. *Decides* to establish a work programme on just transition for discussion of pathways to achieving the goals of the Paris Agreement outlined in Article 2, paragraph 1, in the context of Article 2, paragraph 2, and *requests* the Subsidiary Body for Implementation and the Subsidiary Body for Scientific and Technological Advice to recommend a draft decision on this matter for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its fifth session, with the work programme

to be implemented in a manner that builds on and complements the relevant workstreams under the Convention and the Paris Agreement, including the work programme for urgently scaling up mitigation ambition and implementation;

53. *Decides* to convene, as part of the work programme on just transition, an annual high-level ministerial round table on just transition, beginning at its fifth session;

IX. Finance

54. *Reiterates* Articles 2, 4 and 9 of the Paris Agreement and *highlights* that about USD 4 trillion per year needs to be invested in clean energy technologies by 2030 to be able to reach net zero emissions by 2050,[12] and that, furthermore, a global transformation to a low-carbon economy is expected to require an investment of at least USD 4–6 trillion per year;[13]

55. *Also highlights* that delivering such funding will require a transformation of the financial system and its structures and processes, engaging governments, central banks, commercial banks, institutional investors and other financial actors;

56. *Notes with concern* the growing gap between the needs of developing country Parties, in particular those due to the increasing impacts of climate change and their increased indebtedness, and the support provided and mobilized for their efforts to implement their nationally determined contributions, highlighting that such needs are currently estimated at USD 5.8–5.9 trillion[14] for the pre-2030 period;

57. *Expresses serious concern* that the goal of developed country Parties to mobilize jointly USD 100 billion per year by 2020 in the context of meaningful mitigation action and transparency on implementation has not yet been met and *urges* developed country Parties to meet the goal;[15]

58. *Emphasizes* that accelerated financial support for developing countries from developed countries and other sources is critical to enhancing mitigation action and addressing inequities in access to finance, including its costs, terms and conditions, and economic vulnerability to climate change for developing countries,[16] and that scaled-up public grants for mitigation and adaptation for vulnerable regions, in particular sub-Saharan Africa, would be cost-effective and have high social returns in terms of access to basic energy;

59. *Notes* that global climate finance flows are small relative to the overall needs of developing countries, with such flows in 2019–2020 estimated to be USD 803 billion,[17] which is 31–32 per cent of the annual investment needed to keep the global temperature rise well below 2 °C or at 1.5 °C, and also below what would be expected in the light of the investment opportunities identified and the cost of failure to meet climate stabilization targets;

[12] See International Energy Agency. 2022. *World Energy Outlook 2022*. Paris: International Energy Agency. Available at https://www.iea.org/reports/world-energy-outlook-2022.

[13] As footnote 5 above.

[14] See Standing Committee on Finance. 2021. *First report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement*. Bonn: UNFCCC. Available at https://unfccc.int/topics/climate-finance/workstreams/needs-report.

[15] See Standing Committee on Finance. 2022. *Report on progress towards achieving the goal of mobilizing jointly USD 100 billion per year to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation*. Bonn: UNFCCC. Available at https://unfccc.int/process-and-meetings/bodies/constituted-bodies/standing-committee-on-finance-scf/progress-report.

[16] Intergovernmental Panel on Climate Change. 2022. Summary for Policymakers. *In*: H Pörtner, D Roberts, M Tignor, et al. (eds.). *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg2/.

[17] See document FCCC/CP/2022/8/Add.1−FCCC/PA/CMA/2022/7/Add.1.

60. *Urges* developed country Parties to provide enhanced support, including through financial resources, technology transfer and capacity-building, to assist developing country Parties with respect to both mitigation and adaptation, in continuation of their existing obligations under the Convention, and *encourages* other Parties to provide or continue to provide such support voluntarily;

61. *Calls on* the shareholders of multilateral development banks and international financial institutions to reform multilateral development bank practices and priorities, align and scale up funding, ensure simplified access and mobilize climate finance from various sources and *encourages* multilateral development banks to define a new vision and commensurate operational model, channels and instruments that are fit for the purpose of adequately addressing the global climate emergency, including deploying a full suite of instruments, from grants to guarantees and non-debt instruments, taking into account debt burdens, and to address risk appetite, with a view to substantially increasing climate finance;

62. *Calls on* multilateral development banks to contribute to significantly increasing climate ambition using the breadth of their policy and financial instruments for greater results, including on private capital mobilization, and to ensure higher financial efficiency and maximize use of existing concessional and risk capital vehicles to drive innovation and accelerate impact;

63. *Welcomes* the work in 2022 of the co-chairs of the ad hoc work programme on the new collective quantified goal on climate finance, the deliberations at the 2022 high-level ministerial dialogue on the new collective quantified goal and the report prepared by the President of the twenty-seventh session of the Conference of the Parties;

64. *Requests* the co-chairs of the ad hoc work programme to include in their annual report options for accelerating the achievement of the goal in Article 2 of the Paris Agreement of holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature to 1.5 °C above pre-industrial levels;

65. *Welcomes* the adoption of decision 5/CMA.4, on the new collective quantified goal on climate finance;

66. *Emphasizes* the ongoing challenges faced by many developing country Parties in accessing climate finance and *encourages* further efforts, including by the operating entities of the Financial Mechanism, to simplify access to such finance;

67. *Takes note* of the report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement[18] and in this context *urges* developed country Parties to provide resources for the second replenishment of the Green Climate Fund while demonstrating progression from the previous replenishment and in line with the programming capacity of the Fund;

68. *Decides* to launch the Sharm el-Sheikh dialogue between Parties, relevant organizations and stakeholders to exchange views on and enhance understanding of the scope of Article 2, paragraph 1(c), of the Paris Agreement and its complementarity with Article 9 of the Paris Agreement and *requests* the secretariat, under the guidance of the Presidency of the twenty-seventh session of the Conference of the Parties, to organize two workshops in 2023 in this regard and to prepare a report to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement on the deliberations at these workshops;

X. Technology transfer and deployment

69. *Welcomes with appreciation* the first joint work programme of the Technology Executive Committee and the Climate Technology Centre and Network,[19] for 2023–2027, which will facilitate the transformational change needed to achieve the goals of the

[18] See Standing Committee on Finance. 2021. *First report on the determination of the needs of developing country Parties related to implementing the Convention and the Paris Agreement*. Bonn: UNFCCC. Available at https://unfccc.int/topics/climate-finance/workstreams/needs-report.

[19] See https://unfccc.int/ttclear/tec/documents.html.

Convention and the Paris Agreement, *invites* Parties and stakeholders to cooperate and engage with the Technology Executive Committee and the Climate Technology Centre and Network to support the implementation of the joint work programme activities, including on technology needs assessments, action plans and road maps, *acknowledges* the findings in the final report on the first periodic assessment of the effectiveness and adequacy of the support provided to the Technology Mechanism in supporting the implementation of the Paris Agreement[20] and *decides* that the main challenges identified therein should be considered under the global stocktake;

70. *Highlights* the importance of cooperation on technology development and transfer and innovation in implementing the joint work programme activities;

XI. Capacity-building

71. *Notes* that capacity gaps and needs still exist in developing countries and *calls on* developed country Parties to increase support for long-term country-driven capacity-building interventions to enhance the effectiveness, success and sustainability of those interventions;

XII. Transparency

72. *Recalls* that Parties shall submit their first biennial transparency report, and national inventory report if submitted as a stand-alone report, at the latest by 31 December 2024 and *urges* Parties to swiftly make the necessary preparations for ensuring timely submission thereof;

73. *Recognizes* the importance of the provision of increased support, in a timely, adequate and predictable manner, to developing countries for implementing the enhanced transparency framework under the Paris Agreement;

XIII. Taking stock

74. *Welcomes* the progress of the first global stocktake and *notes with appreciation* the balanced, comprehensive and inclusive nature of the technical dialogue of that stocktake;

75. *Emphasizes* that the outcome of the first global stocktake shall inform Parties in updating and enhancing, in a nationally determined manner, their actions and support in accordance with the relevant provisions of the Paris Agreement, as well as in enhancing international cooperation on climate action;

76. *Urges* all stakeholders involved in the first global stocktake to focus on achieving the outcome referred to in Article 14, paragraph 3, of the Paris Agreement;

77. *Welcomes* the invitation of the United Nations Secretary-General to convene a climate ambition summit in 2023 ahead of the conclusion of the first global stocktake at the twenty-eighth session of the Conference of the Parties and the fifth session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (November–December 2023);

XIV. Article 6 of the Paris Agreement

78. *Welcomes* the adoption of decisions 6/CMA.4, 7/CMA.4 and 8/CMA.4, on issues relating to Article 6 of the Paris Agreement;

[20] FCCC/SBI/2022/13.

XV. Ocean

79. *Encourages* Parties to consider, as appropriate, ocean-based action in their national climate goals and in the implementation of these goals, including but not limited to nationally determined contributions, long-term strategies and adaptation communications;

XVI. Forest

80. *Recalls* Article 5, paragraph 2, of the Paris Agreement, whereby Parties are encouraged to take action to implement and support, including through results-based payments, the existing framework as set out in related guidance and decisions already agreed under the Convention[21] for policy approaches and positive incentives for activities relating to reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries; and alternative policy approaches, such as joint mitigation and adaptation approaches for the integral and sustainable management of forests, while reaffirming the importance of incentivizing, as appropriate, non-carbon benefits associated with such approaches;

81. *Encourages* Parties to consider, as appropriate, nature-based solutions or ecosystem-based approaches, taking into consideration United Nations Environment Assembly resolution 5/5,[22] for their mitigation and adaptation action while ensuring relevant social and environmental safeguards;

XVII. Enhancing implementation: action by non-Party stakeholders

82. *Acknowledges* the engagement of non-Party stakeholders in climate action, which complements and broadens it, while recognizing the pivotal role of governments in action on climate change within the framework of the Convention, the Kyoto Protocol and the Paris Agreement;

83. *Recognizes* the important role of indigenous peoples, local communities, cities and civil society, including youth and children, in addressing and responding to climate change and *highlights* the urgent need for multilevel and cooperative action in this regard;

84. *Notes* the adoption of the action plan under the Glasgow work programme on Action for Climate Empowerment by decision 23/CP.27;

85. *Encourages* Parties to increase the full, meaningful and equal participation of women in climate action and to ensure gender-responsive implementation and means of implementation, including by fully implementing the Lima work programme on gender and its gender action plan, to raise climate ambition and achieve climate goals;

86. *Invites* Parties to provide support to developing countries for undertaking gender-related action and implementing the gender action plan;

87. *Recognizes* the role of children and youth as agents of change in addressing and responding to climate change and *encourages* Parties to include children and youth in their processes for designing and implementing climate policy and action, and, as appropriate, to consider including young representatives and negotiators into their national delegations, recognizing the importance of intergenerational equity and maintaining the stability of the climate system for future generations;

88. *Expresses its appreciation* to the Presidency of the twenty-seventh session of the Conference of the Parties for its leadership in promoting the full, meaningful and equal participation of children and youth, including by co-organizing the first youth-led climate forum (the Sharm el-Sheikh youth climate dialogue), hosting the first children and youth pavilion and appointing the first youth envoy of a Presidency of the Conference of the Parties

[21] Including decisions 1/CP.16 and 9/CP.19.

[22] UNEP/EA.5/Res.5.

and *encourages* future incoming Presidencies of the Conference of the Parties to consider doing the same;

89. *Expresses its appreciation* to the children and youth constituency for co-organizing the Sharm el-Sheikh youth climate dialogue with the Presidency of the twenty-seventh session of the Conference of the Parties and *notes* the outcomes of the seventeenth Conference of Youth, organized by the constituency and held in Sharm el-Sheikh in November 2022;

90. *Encourages* Parties and non-Party stakeholders to engage actively in the Marrakech Partnership for Global Climate Action;

91. *Welcomes* the leadership of the Presidency of the Conference of the Parties and the high-level champions, in particular in the context of the Sharm el-Sheikh Adaptation Agenda and the Breakthrough Agenda, and the collaboration between Parties and non-Party stakeholders, and *emphasizes* the need for continued acceleration and collaboration;

92. *Welcomes* the recommendations of the High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities, launched by the United Nations Secretary-General in March 2022, which are designed to enhance transparency and accountability related to, and progress in achieving, the climate pledges of businesses, investors, cities and regions;

93. *Invites* the secretariat to ensure greater accountability of voluntary initiatives through the Non-State Actor Zone for Climate Action platform;[23]

94. *Welcomes* the convening of five regional forums led by the President of the twenty-seventh session of the Conference of the Parties and the high-level champions, in collaboration with the United Nations Regional Economic Commissions, on initiatives for financing climate action and the Sustainable Development Goals.

10th plenary meeting
20 November 2022

[23] https://climateaction.unfccc.int/.

Decision 2/CMA.4

Funding arrangements for responding to loss and damage associated with the adverse effects of climate change, including a focus on addressing loss and damage[1]

The Conference of the Parties and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling the Convention and the Paris Agreement,

Noting the increasing urgency of enhancing efforts to avert, minimize and address loss and damage associated with the adverse effects of climate change in the light of continued global warming and its significant impacts on vulnerable populations and the ecosystems on which they depend, as illustrated by the findings in relevant recent scientific reports, including the contributions of Working Groups I[2] and II[3] to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change,

Also noting that keeping the global average temperature rise to below 1.5 °C will be essential to limiting future loss and damage and *expressing alarm* that the contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, in line with other best available science, concluded that the gravity, scope and frequency of loss and damage will continue to increase with every additional fraction of a degree of temperature increase,

Recalling previous work under the UNFCCC as part of the consideration of the current state of finance for addressing loss and damage associated with the adverse effects of climate change,[4]

Acknowledging the many institutions and stakeholders involved in financing activities for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events,

Welcoming related initiatives announced at the twenty-seventh session of the Conference of the Parties, including, but not limited to, the Global Shield against Climate Risks and the United Nations Secretary-General's Early Warnings for All,

Acknowledging that existing funding arrangements fall short of responding to current and future impacts of climate change and are not sufficient to address the existing funding gaps related to providing action and support in responding to loss and damage associated with the adverse effects of climate change,

Recalling paragraphs 7(b) and 2 of the reports on these sessions of the Conference of the Parties and the Conference of the Parties serving as the meeting of the Parties to the Paris

[1] This item and the outcomes thereof are without prejudice to the consideration of similar issues in the future.

[2] Intergovernmental Panel on Climate Change. 2021. *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. V Masson-Delmotte, P Zhai, A Pirani, et al. (eds.). Cambridge: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg1/.

[3] Intergovernmental Panel on Climate Change. 2022. *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. H Pörtner, D Roberts, M Tignor, et al. (eds.). Cambridge: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg2/.

[4] Including but not limited to the 2016 Forum of the Standing Committee of Finance on financial instruments that address the risks of loss and damage, a technical paper on the elaboration of the sources of and modalities for accessing financial support for addressing loss and damage (FCCC/TP/2019/1), the Suva expert dialogue on loss and damage associated with climate change impacts, and the 1st Glasgow Dialogue, to discuss funding arrangements for activities to avert, minimize and address loss and damage.

Agreement respectively, in relation to the adoption of agenda sub-item 8(f), "Matters relating to finance: matters relating to funding arrangements responding to loss and damage associated with the adverse effects of climate change, including a focus on addressing loss and damage",

1. *Acknowledge* the urgent and immediate need for new, additional, predictable and adequate financial resources to assist developing countries that are particularly vulnerable to the adverse effects of climate change in responding to economic and non-economic loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events, especially in the context of ongoing and ex post (including rehabilitation, recovery and reconstruction) action;

2. *Decide* to establish new funding arrangements for assisting developing countries that are particularly vulnerable to the adverse effects of climate change, in responding to loss and damage, including with a focus on addressing loss and damage by providing and assisting in mobilizing new and additional resources, and that these new arrangements complement and include sources, funds, processes and initiatives under and outside the Convention and the Paris Agreement;

3. *Also decide*, in the context of establishing the new funding arrangements referred to in paragraph 2 above, to establish a fund for responding to loss and damage whose mandate includes a focus on addressing loss and damage;

4. *Establish* a transitional committee on the operationalization of the new funding arrangements for responding to loss and damage and the fund established in paragraph 3 above (hereinafter referred to as the Transitional Committee), in accordance with the terms of reference contained in the annex, to make recommendations based on, inter alia, elements for operationalization included in paragraph 5 below, for consideration and adoption by the Conference of the Parties at its twenty-eighth session (November–December 2023) and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its fifth session (November–December 2023) with a view to operationalizing the funding arrangements referred to in paragraph 2 above, including the fund referred to in paragraph 3 above;

5. *Agree* that the recommendations to operationalize the funding arrangements and the fund referred to in paragraphs 2–3 above respectively shall consider, inter alia:

(a) Establishing institutional arrangements, modalities, structure, governance and terms of reference for the fund referred to in paragraph 3 above;

(b) Defining the elements of the new funding arrangements referred to in paragraph 2 above;

(c) Identifying and expanding sources of funding;

(d) Ensuring coordination and complementarity with existing funding arrangements;

6. *Decide* that the Transitional Committee referred to in paragraph 4 above will be informed by the following, inter alia:

(a) The current landscape of institutions, including global, regional and national, that are funding activities related to addressing loss and damage, and ways in which coherence, coordination and synergies among them can be enhanced;

(b) The gaps within that current landscape, including the types of gap, such as relating to speed, eligibility, adequacy and access to finance, noting that these may vary depending on the challenge, such as climate-related emergencies, sea level rise, displacement, relocation, migration, insufficient climate information and data, or the need for climate-resilient reconstruction and recovery;

(c) The priority gaps for which solutions should be explored;

(d) The most effective ways in which to address the gaps, especially for the most vulnerable populations and the ecosystems on which they depend;

(e) Potential sources of funding, recognizing the need for support from a wide variety of sources, including innovative sources;

7. *Also decide* to undertake the following activities for informing the recommendations referred to in paragraphs 4–5 above:

(a) Request the secretariat to conduct two workshops in 2023, with the participation of a diversity of institutions, relevant to addressing loss and damage associated with climate change impacts;

(b) Request the secretariat to prepare a synthesis report on existing funding arrangements and innovative sources relevant to addressing loss and damage associated with the adverse effects of climate change;

(c) Invite Parties and relevant organizations to submit via the submission portal[5] by 15 February 2023 views on topics for and the structure of the 2nd Glasgow Dialogue[6] and the workshops referred to in paragraph 7(a) above;

(d) Invite United Nations agencies, intergovernmental organizations, and bilateral, multilateral and international financial institutions to submit inputs on how they might enhance access to and/or the speed, scope and scale of availability of finance for activities relevant to addressing loss and damage, including potential limitations and barriers and options for addressing them;

8. *Further decide* that the activities and considerations referred to in this decision will be undertaken taking into account the discussions at the 2nd and 3rd Glasgow Dialogues, to take place at the fifty-eighth (June 2023) and sixtieth (June 2024) sessions of the Subsidiary Body for Implementation respectively;

9. *Decide* that the 2nd and 3rd Glasgow Dialogues will build on the 1st Glasgow Dialogue, held at the fifty-sixth session of the Subsidiary Body for Implementation, and that the 2nd Dialogue shall focus on the operationalization of the new funding arrangements established in paragraph 2 above and the fund established in paragraph 3 above as well as on maximizing support from existing funding arrangements relevant for, inter alia, responding to economic and non-economic losses, slow onset events and extreme weather events, and that they will inform the work of the Transitional Committee;

10. *Request* the Chair of the Subsidiary Body for Implementation to provide a summary report on each Glasgow Dialogue no later than four weeks thereafter;

11. *Invite* the United Nations Secretary-General to convene the principals of international financial institutions and other relevant entities with a view to identifying the most effective ways to provide funding to respond to needs related to addressing loss and damage associated with the adverse effects of climate change;

12. *Also invite* international financial institutions to consider, at the 2023 Spring Meetings of the World Bank Group and the International Monetary Fund, the potential for such institutions to contribute to funding arrangements, including new and innovative approaches, responding to loss and damage associated with the adverse effects of climate change;

13. *Reiterate* decision 1/CMA.3, paragraph 64, in which developed country Parties, the operating entities of the Financial Mechanism, United Nations entities and intergovernmental organizations and other bilateral and multilateral institutions, including non-governmental organizations and private sources, are urged to provide enhanced and additional support for activities addressing loss and damage associated with the adverse effects of climate change;

14. *Request* the President of the Conference of the Parties at its twenty-seventh session, in collaboration with the incoming President of the Conference of the Parties at its twenty-eighth session, to convene ministerial consultations prior to the twenty-eighth session of the Conference of the Parties and the fifth session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement to advance consideration and understanding of a possible outcome on this matter at that session;

[5] https://www4.unfccc.int/sites/submissionsstaging/Pages/Home.aspx.

[6] See decision 1/CMA.3, para. 73.

15. *Also request* the secretariat to prepare a synthesis report on the outcomes of the activities and deliverables referred to in paragraphs 7(b), 11, 12 and 14 above to inform the recommendations to be developed by the Transitional Committee;

16. *Decide* that the secretariat shall support and facilitate the work of the Transitional Committee;

17. *Take note of* the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in paragraphs 2–16 above;

18. *Request* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

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Nationally determined contributions under the Paris Agreement

Revised synthesis report by the secretariat

Summary

This is an update of the key findings of the synthesis report on nationally determined contributions contained in document FCCC/PA/CMA/2021/8, which was published on 17 September 2021. It takes into account information from the 165 latest available nationally determined contributions communicated by the 192 Parties to the Paris Agreement and recorded in the interim registry of nationally determined contributions as at 12 October 2021.

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Contents

		Page
	Abbreviations and acronyms	3
I.	Executive summary	4
II.	Mandate	10
III.	Background, scope and approach	10
	A. Background	10
	B. Scope	11
	C. Approach	12
IV.	Synthesis of information contained in nationally determined contributions	12
	A. Overview	12
	B. Scope and coverage	13
	C. Time frames and/or periods of implementation	17
	D. Quantifiable information on the reference point (including, as appropriate, a base year)	17
	E. Assumptions and methodological approaches, including for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals	18
	F. Planning and implementation processes	20
	G. Mitigation co-benefits resulting from adaptation action and/or economic diversification plans	24
	H. Fairness and ambition in the light of national circumstances	25
	I. Contribution towards achieving the objective of the Convention as set out in its Article 2, and towards Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement	26
	J. Adaptation	29
	K. Domestic mitigation measures	36
	L. Means of implementation	40

Abbreviations and acronyms

2006 IPCC Guidelines	*2006 IPCC Guidelines for National Greenhouse Gas Inventories*
ACE	Action for Climate Empowerment
CDM	clean development mechanism
CH_4	methane
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
CO_2	carbon dioxide
CO_2 eq	carbon dioxide equivalent
COP	Conference of the Parties
COVID-19	coronavirus disease 2019
GDP	gross domestic product
GHG	greenhouse gas
GWP	global warming potential
GWP-100*	global warming potential values with a 100-year time-horizon
HFC	hydrofluorocarbon
INDC	intended nationally determined contribution
IPCC	Intergovernmental Panel on Climate Change
IPPU	industrial processes and product use
IQR*	interquartile range
LT-LEDS	long-term low-emission development strategy(ies)
LULUCF	land use, land-use change and forestry
N_2O	nitrous oxide
NAP	national adaptation plan
NDC	nationally determined contribution
NF_3	nitrogen trifluoride
PFC	perfluorocarbon
REDD+	reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks (decision 1/CP.16, para. 70)
SDG	Sustainable Development Goal
SF_6	sulfur hexafluoride
SLCP*	short-lived climate pollutant
SR1.5	Intergovernmental Panel on Climate Change Special Report on Global Warming of 1.5 °C
SSP	Shared Socioeconomic Pathway

* Used exclusively in figures.

I. Executive summary

1. This report has been prepared in response to the requests from COP 21 and CMA 2[1] for the secretariat to prepare a synthesis report on NDCs submitted by Parties. In view of the postponement from 2020 to 2021 of the United Nations Climate Change Conference to be held in Glasgow and the impact of the COVID-19 pandemic on the preparation of NDCs, the secretariat informed Parties that it would publish two editions of the NDC synthesis report: an initial version by 28 February 2021 and the full version in advance of the pre-COP meeting, scheduled for 30 September to 2 October 2021. Further, on 3 September 2021, the secretariat notified Parties that in order to ensure that COP 26 has before it the latest information available, the secretariat will provide an update of the key findings of the report shortly before its start, by 25 October 2021.

2. This update of the key findings of the NDC synthesis report synthesizes information from the 165 latest available NDCs, representing all 192 Parties to the Paris Agreement, including the 116 new or updated NDCs communicated by 143 Parties, recorded in the interim NDC registry as at 12 October 2021, covering 94.1 per cent of the total global emissions in 2019, which are estimated at 52.4 Gt CO_2 eq without LULUCF.[2]

3. The COP and CMA guidance[3] on the information necessary for clarity, transparency and understanding of NDCs was used as a framework for synthesizing the relevant information contained in the communicated NDCs, which was supplemented by the synthesis of other information included in the NDCs but not covered by the guidance. The synthesized information is presented for all the represented Parties taken together.

4. Almost all[4] Parties provided the information necessary to facilitate clarity, transparency and understanding of their NDCs in accordance with the COP guidance, with almost all Parties that submitted new or updated NDCs already applying the relevant further CMA guidance.

5. All Parties provided information on mitigation targets or mitigation co-benefits resulting from adaptation actions and/or economic diversification plans. The mitigation targets range from economy-wide absolute emission reduction targets to strategies, plans and actions for low-emission development. In their NDCs:

(a) Most Parties provided quantified mitigation targets, expressed as clear numerical targets, while some included strategies, plans and actions as components of their NDCs for which there is no quantifiable information;

(b) Most Parties communicated economy-wide targets, covering all or almost all sectors defined in the 2006 IPCC Guidelines, with an increasing number of Parties moving to absolute emission reduction targets in their new or updated NDCs;

(c) In terms of GHGs, almost all NDCs cover CO_2 emissions, most cover CH_4 and N_2O emissions, many cover HFC emissions and some cover PFC, SF_6 and/or NF_3 emissions;

(d) Some Parties provided information on mitigation co-benefits resulting from their adaptation actions and/or economic diversification plans, mostly in combination with other targets;

(e) Most of the Parties that submitted new or updated NDCs have strengthened their commitment to reducing or limiting GHG emissions by 2025 and/or 2030, demonstrating increased ambition in addressing climate change.

[1] Decision 1/CMA.2, para. 10.

[2] Unless otherwise noted, in this report global GHG emission totals exclude emissions from forestry and land use or LULUCF but include emissions from international maritime transport and international aviation.

[3] Decisions 1/CP.21, para. 27; and 4/CMA.1 and annex I.

[4] The following terms are used in this report to indicate the percentage of Parties whose NDCs mention particular information: “a few” for less than 10 per cent; “some” for 10–40 per cent; “many” for 41–70 per cent; “most” for 71–90 per cent; and “almost all” for more than 90 per cent.

6. Almost all Parties communicated an NDC implementation period of until 2030, while a few specified an implementation period of until 2025, 2035, 2040 or 2050. Many Parties identified 1 January 2021 as their starting date for NDC implementation; some others indicated that they started implementing their NDC in or before 2020; and a few Parties will start doing so from 2022.

7. Almost all Parties provided quantified information on their mitigation targets and reference points. Of the Parties that submitted new or updated NDCs, almost all updated the basis for defining their targets, including reference points and/or 'business as usual' scenarios. Although such updates lead to higher-quality NDCs, for some Parties they lead to significant changes in the estimated emission levels for 2025 and 2030 for reasons other than changes to target levels.

8. Most Parties provided information on voluntary cooperation under Article 6 of the Paris Agreement. Almost all of them stated that they plan to or will possibly use at least one type of voluntary cooperation. At the same time, some Parties have set qualitative limits on their use of voluntary cooperation for achieving their mitigation targets.

9. Of the Parties that communicated new or updated NDCs, the share that indicated planned or possible use of at least one type of voluntary cooperation has increased (from 46 to 85 per cent) since their previous NDCs. Similarly, the share of those Parties that have set qualitative limits on their use of voluntary cooperation has sharply increased (from 20 to 36 per cent) since their previous NDCs.

10. Total global GHG emission level (without LULUCF), taking into account implementation of the latest NDCs of all Parties to the Paris Agreement, is estimated to be around 54.7 (52.7–56.7) Gt CO_2 eq in 2025[5] and 54.9 (51.5–58.3) Gt CO_2 eq in 2030,[6] which are:

(a) In 2025, 58.1 per cent higher than in 1990 (34.6 Gt CO_2 eq), 15.5 per cent higher than in 2010 (47.4 Gt CO_2 eq) and 4.3 per cent higher than in 2019 (52.4 Gt CO_2 eq);

(b) In 2030, 58.7 per cent higher than in 1990, 15.9 per cent higher than in 2010 and 4.7 per cent higher than 2019.

11. In comparison, the total GHG emissions of the Parties that communicated new or updated NDCs are estimated to be 26.3 Gt CO_2 eq in 2019, and total GHG emission levels resulting from implementation of their NDCs are estimated to be around 25.6 (24.7–26.4) Gt CO_2 eq in 2025 and 23.6 (22.2–25.0) Gt CO_2 eq in 2030, which is about 3.7 (3.3-4.1) per cent lower for 2025 and 11.0 (10.1–12.0) per cent lower for 2030 than the estimated total GHG emissions for these years according to their previous NDCs. In absolute terms, the projected emission levels for 2025 and 2030 for this group of Parties are now lower than according to their previous NDCs by 0.99 (0.91–1.06) Gt CO_2 eq and 2.92 (2.80–3.03) Gt CO_2 eq, respectively. Compared with the 2010 level, total GHG emissions of these Parties are now estimated to be 1.5 (+1.8 to -4.8) per cent lower by 2025 and 9.0 (3.6-14.5) per cent lower by 2030.

12. The total global GHG emission level, taking into account full implementation of all the latest NDCs (including their conditional elements), implies possibility of global emissions peaking before 2030, with the lower bound of the 2030 emission level (51.5 Gt CO_2 eq) estimated to be up to 1.8 per cent below the 2019 emission level (52.4 Gt CO_2 eq) and 2.2 per cent below the lower bound of the estimated 2025 emission level (52.7 Gt CO_2 eq). The implementation of most conditional elements depends on access to enhanced financial resources, technology transfer and technical cooperation, and capacity-building support;

[5] Unless otherwise noted, for this report GWP values with a 100-year time-horizon from the AR6 have been used. For NDCs that include estimates of GHG emissions calculated using other GWP values (e.g. from previous ARs), a conversion has been applied. For further information, including on estimation methods and approaches, see document FCCC/PA/CMA/2021/8/Add.3.

[6] Unless otherwise noted, in this report the average of the quantification is followed by a range that represents the minimum and maximum values after aggregation, since several Parties presented conditional and unconditional elements of their NDCs and, in some cases, ranges of values for both.

availability of market-based mechanisms; and absorptive capacity of forests, and other ecosystems.

13. The total global GHG emission level in 2030, taking into account implementation of all the latest NDCs, is expected to be 15.9 per cent above the 2010 level. According to the SR1.5,[7] to be consistent with global emission pathways with no or limited overshoot of the 1.5 °C goal, global net anthropogenic CO_2 emissions need to decline by about 45 per cent from the 2010 level by 2030, reaching net zero around 2050. For limiting global warming to below 2 °C, CO_2 emissions need to decrease by about 25 per cent from the 2010 level by 2030 and reach net zero around 2070.

14. In the context of the carbon budget consistent with 50 per cent likelihood of limiting warming to 1.5 °C, cumulative CO_2 emissions in 2020–2030 based on the latest NDCs would likely use up 89 per cent of the remaining carbon budget, leaving a post-2030 carbon budget of around 56 Gt CO_2, which is equivalent to the average annual CO_2 emissions in 2020–2030. Similarly, in the context of the carbon budget consistent with a likely chance of keeping warming below 2 °C, cumulative CO_2 emissions in 2020–2030 based on the latest NDCs would likely use up around 39 per cent of the remaining carbon budget.

15. The information in paragraphs 10, 13 and 14 above implies an urgent need for either a significant increase in the level of ambition of NDCs between now and 2030 or a significant overachievement of the latest NDCs, or a combination of both, in order to attain cost-optimal emission levels suggested in many of the scenarios considered by the IPCC for keeping warming well below 2 °C or limiting it to 1.5 °C. If emissions are not reduced by 2030, they will need to be substantially reduced thereafter to compensate for the slow start on the path to net zero emissions. The SR1.5 identifies net zero CO_2 emissions as a prerequisite for halting warming at any level.

16. Some Parties provided information on long-term mitigation visions, strategies and targets for up to and beyond 2050, referring to climate neutrality, carbon neutrality, GHG neutrality or net zero emissions. These Parties' total GHG emission level is estimated to be 14.3 (13.6 to 14.9) Gt CO_2 eq in 2030, which is a reduction of 26 (22–29) per cent compared with the 2010 level.

17. Mindful of the inherent uncertainty of such long-term estimates, the information indicates that these Parties' total GHG emission level could be 83–88 per cent lower in 2050 than in 2019, with annual per capita emissions estimated at 1.0–1.4 t CO_2 eq. Global per capita emission levels by 2050 under the well-below 2 °C and 1.5 °C scenarios are very similar, at 1.6–2.4 t CO_2 eq and 0.6–1.2 t CO_2 eq, respectively.

18. Almost all Parties explained their approach to NDC preparation and implementation. Many linked their NDCs to their commitment to transitioning to a sustainable and/or low-carbon and resilient economy, taking into account social, environmental and economic factors as well as the SDGs. In addition, many Parties indicated that they have integrated their NDC targets, goals and policies into national legislative, regulatory and planning processes as a means of ensuring implementation.

19. Many Parties highlighted policy coherence and synergies between their domestic mitigation measures[8] and development priorities, which include the SDGs, and for some that communicated new or updated NDCs, LT-LEDS and green recovery from the COVID-19 pandemic.

20. Many Parties referred to formal arrangements in place for domestic stakeholder consultation. Most of them indicated that they conducted consultations and engagement in

[7] IPCC. 2018. *IPCC Special Report on the Impacts of Global Warming of 1.5 °C above Pre-industrial Levels and Related Global Greenhouse Gas Emission Pathways in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty.* V Masson-Delmotte, P Zhai, H-O Pörtner, et al. (eds.). Geneva: World Meteorological Organization. Available at https://www.ipcc.ch/sr15/.

[8] In this report, (domestic) mitigation measures refers to specific domestic policies and actions that contribute to achieving mitigation objectives identified in NDCs, including adaptation actions and economic diversification plans with mitigation co-benefits.

an inclusive and participatory manner, with some Parties specifically referencing gender-sensitive consultations.

21. Parties are increasingly[9] recognizing gender integration as a means to enhance the ambition and effectiveness of their climate action. Most Parties provided information related to gender in their NDCs and many affirmed that they will take gender into account in implementing them.[10] Of the Parties that referenced gender in their previous NDCs, most elaborated more on the topic in their new or updated NDCs. Some included information on how gender had been or was planned to be mainstreamed in NDC implementation.

22. Some Parties described the role of local communities and the role, situation and rights of indigenous peoples in the context of their NDCs, describing the specific vulnerabilities of indigenous peoples that are particular to their circumstances, the importance of drawing on indigenous and local knowledge to strengthen climate efforts, and arrangements to enable greater participation in and contributions to climate action by indigenous peoples.

23. Almost all Parties provided information on using one or more ACE elements[11] to promote implementation of mitigation and adaptation activities, and in their new or updated NDCs Parties generally communicated more clearly and in more detail on general principles, past achievements, future commitments, and needs and gaps in relation to ACE.

24. Most Parties included adaptation-related information in their NDCs. Some of the adaptation components were designated as adaptation communications. Parties provided information in particular on adaptation-related research; vulnerabilities; adaptation measures, in particular NAPs and sectoral actions; contingency measures; synergies with mitigation and other global frameworks; and monitoring and evaluation of adaptation.

25. In comparison with the INDCs, more of the NDCs contain adaptation information. The adaptation components of the NDCs, where included, indicate increased focus on national adaptation planning, in particular on the process to formulate and implement NAPs. The new or updated NDCs include, in comparison with the same Parties' previous NDCs, more information on time-bound quantitative adaptation targets and the associated indicator frameworks, more specific links between adaptation efforts and efforts towards the SDGs, and more specific information on synergies and co-benefits between adaptation and mitigation.

26. In terms of adaptation priorities, the NDCs illustrate that Parties continue to focus on food production and nutrition security; freshwater resources; terrestrial and wetland ecosystems; human health; key economic sectors and services; disaster risk management and early warning; human habitats and urban areas; coastal areas and sea level rise; ocean ecosystems; and livelihoods and poverty.

27. Almost all Parties outlined domestic mitigation measures as key instruments for achieving mitigation targets of their NDCs and/or targets for sectors or areas, such as energy supply, transport, buildings, industry, agriculture, LULUCF and waste.

28. Domestic mitigation measures for renewable energy generation were most frequently mentioned by Parties, followed by measures for improvement in the energy efficiency of buildings. Some Parties communicated quantitative targets for the share (ranging from 15 to 100 per cent) of renewable energy in electricity generation by 2030; and many of those target shares fall within or above the IPCC range of 47–65 per cent consistent with 1.5 ºC pathways.[12] For the Parties that communicated new or updated NDCs, renewable energy generation continued, as in their previous NDCs, to be the most frequently indicated

[9] The share of Parties that referred to gender and consider it a cross-cutting issue in the new or updated NDCs has increased significantly since their previous NDCs.

[10] For more information on gender under the UNFCCC, see https://unfccc.int/topics/gender/workstreams/chronology-of-gender-in-the-intergovernmental-process.

[11] ACE denotes work under Article 12 of the Paris Agreement; its objective is to empower all members of society to engage in climate action through education, training, public awareness, public participation, public access to information, and international cooperation on these issues (the six ACE elements).

[12] The interquartile range of global renewable energy share in electricity generation by 2030 consistent with the emission pathways to 1.5 °C with no or limited overshoot in the SR1.5.

mitigation option, with the share of Parties indicating this option sharply increasing since their previous NDCs (from 55 to 87 per cent).

29. Renewable energy generation and shifting to low- or zero-carbon fuels were frequently indicated as being relevant to reducing the carbon intensity of electricity and other fuels, including by increasing the electrification rate of the supply and electrifying end-use of energy. Improving energy efficiency and shifting to more efficient modes of transport were often referenced in relation to reducing energy demand. Across all priority mitigation areas, Parties frequently indicated waste-to-energy, improved management of manure and herds, and fluorinated gas substitution as key mitigation options relevant to reducing non-CO_2 emissions. Parties often linked measures to the concept of circular economy,[13] including reducing and recycling waste. Carbon pricing was frequently identified as efficiently incentivizing low-carbon behaviours and technologies by putting a price on GHG emissions.

30. In terms of measures for enhancing carbon sequestration in soil or vegetation, afforestation, reforestation and revegetation, sustainable forest management, and reduced deforestation and forest degradation were most frequently indicated. Many developing country Parties referred to reducing deforestation as a priority with high mitigation potential, including by implementing REDD+ activities.

31. The SR1.5 identifies mitigation options considered relevant to aligning with 1.5 °C pathways, including:

(a) Halting investment in unabated coal by 2030. A few Parties communicated corresponding measures, such as phasing out use of unabated coal to produce electricity by 2025;

(b) Phasing out of sales of fossil-fuel passenger vehicles by 2035–2050. A few Parties communicated corresponding measures, including banning new registration of diesel and gasoline vehicles after 2030;

(c) Requiring newly constructed buildings to be near zero energy by 2020. Some Parties communicated corresponding measures, such as requiring new buildings constructed after 1 January 2020 to consume almost zero energy;

(d) Expanding forest cover by 2030. Some Parties communicated quantitative targets for increasing national forest cover, such as increasing forest cover to 60 per cent of the national territory without competing for land with the agriculture sector.

32. Some Parties considered mitigation co-benefits resulting from their adaptation action and/or economic diversification plans. In their new or updated NDCs more Parties reported on mitigation co-benefits of adaptation action and economic diversification plans, including information on specific projects, measures and activities with the resulting co-benefits, compared with the information in their previous NDCs. Similarly, more Parties provided information on their consideration of social and economic consequences of response measures, and of just transition and/or economic diversification.

33. Adaptation actions and economic diversification plans with mitigation co-benefits include afforestation and reforestation activities, climate-smart agriculture, reducing food waste, vertical farming, adapting coastal ecosystems, conservation plans for protected areas, nature-based solutions, increasing the share of renewable sources in energy generation, improving energy efficiency, carbon dioxide capture and storage, fuel switch and fuel price reforms in the transport sector, and moving to circular economy for better waste management.

34. Almost all Parties mentioned some or all means of implementation in their NDCs, although the structure and depth of that information varied significantly. While some Parties included a dedicated section on means of implementation or separate sections on finance, technology and/or capacity-building, many mentioned or referred to aspects of means of implementation in other sections of their NDCs.

35. Many Parties provided quantitative estimates of financial support needs for NDC implementation. In their new or updated NDCs some Parties provided quantitative estimates

[13] Circular economy refers to the continual use of resources and minimization of waste to reduce demand for exploiting new resources, including minerals, fossil fuels and biomass.

of financial support needs, with many of them providing updated quantitative estimates and many others providing estimates for the first time.

36. Many Parties identified certain types of technology that they intend to use for implementing adaptation and mitigation actions, such as energy-efficient appliances, renewable energy technologies, low- or zero-emission vehicles, blended fuel and climate-smart agriculture. Further, the main areas of technology needs mentioned by Parties were energy, agriculture, water, waste, transport, and climate observation and early warning.

37. Most Parties identified capacity-building as a prerequisite for NDC implementation. Capacity-building needs for formulating policy, integrating mitigation and adaptation into sectoral planning processes, accessing finance and providing the information necessary for clarity, transparency and understanding of NDCs were identified. In the new or updated NDCs, compared with in their previous NDCs, more Parties expressed capacity-building needs for adaptation.

38. Some Parties referred to the potential impacts of the COVID-19 pandemic in their new or updated NDCs. The longer-term effects of the related changes in national and global GHG emissions will depend on the duration of the pandemic and the nature and scale of recovery measures. At this stage, it is unclear how the observed drop in total CO_2 emissions from 2019 to 2020 (estimated at around 7 per cent in the contribution of Working Group I to the AR6 (cross-chapter box 6.1)[14]) associated with the impacts of COVID-19 and the effect of global recovery packages could affect global GHG emission levels in 2025 and 2030.

[14] IPCC. 2021. *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. V Masson-Delmotte, P Zhai, A Pirani, et al. (eds.). Cambridge: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg1/.

[English only]

II. Mandate

39. Under Article 4, paragraph 2, of the Paris Agreement, each Party is to prepare, communicate and maintain successive NDCs that it intends to achieve. The communicated NDCs are to be recorded in a public registry maintained by the secretariat.[15]

40. COP 21 invited Parties to communicate their first NDC no later than when the Party submits its respective instrument of ratification, acceptance or approval of or accession to the Paris Agreement. A Party is also considered to have satisfied this provision, unless the Party decides otherwise, if it had communicated an INDC prior to becoming a Party to the Paris Agreement.[16]

41. COP 21 requested Parties whose INDC pursuant to decision 1/CP.20 contains a time frame:

(a) Up to 2025: to communicate by 2020 a new NDC, and to do so every five years thereafter pursuant to Article 4, paragraph 9, of the Paris Agreement;

(b) Up to 2030: to communicate or update by 2020 their NDC, and to do so every five years thereafter pursuant to Article 4, paragraph 9, of the Paris Agreement.[17]

42. COP 21 decided that Parties shall submit their NDCs to the secretariat at least 9–12 months in advance of the relevant CMA session with a view to facilitating the clarity, transparency and understanding of the NDCs, including through a synthesis report prepared by the secretariat.[18]

43. Recalling that decision, CMA 2 requested the secretariat to make the synthesis report available to COP 26.[19]

III. Background, scope and approach

A. Background

44. Owing to the circumstances related to the COVID-19 pandemic, the Bureau of the governing bodies, at its meeting on 28 May 2020, decided to postpone from November 2020 to November 2021 the Glasgow Conference, including COP 26.[20]

45. The pandemic has had an adverse impact on many Parties' NDC preparation process, leading to challenges in meeting the timelines stipulated in decision 1/CP.21.

46. In view of the postponement of the Glasgow Conference and the impact of the pandemic on the NDC preparation process, the secretariat notified Parties on 13 August 2020 that it was planning to publish two editions of the NDC synthesis report: an initial version by 28 February 2021 based on the NDCs recorded in the interim NDC registry as at 31 December 2020; and the full version containing all the latest information, to be made available to COP 26 in accordance with decision 1/CMA.2.

[15] Until the modalities and procedures for the operation and use of the public registry have been finalized under the Subsidiary Body for Implementation, NDCs are being recorded in the interim NDC registry (available at https://www4.unfccc.int/sites/ndcstaging/Pages/Home.aspx).

[16] Decision 1/CP.21, para. 22.

[17] Decision 1/CP.21, paras. 23–24.

[18] Decision 1/CP.21, para. 25.

[19] Decision 1/CMA.2, para. 10.

[20] The notification is available at https://unfccc.int/sites/default/files/resource/message_to_parties_and_observers_dates_of_cop_26.pdf.

47. The initial version of the NDC synthesis report, along with its three technical addenda, was published on the UNFCCC website on 26 February 2021.[21] It synthesizes information from 48 NDCs, representing 75 Parties, submitted as at 31 December 2020 as new or updated NDCs in response to paragraphs 23–24 of decision 1/CP.21, or as new NDCs in case the Party's INDC was not converted automatically in accordance with paragraph 22 of that decision.

48. The full version of the NDC synthesis report, along with its three technical addenda, was published on 17 September 2021 on the basis of all NDCs recorded in the interim NDC registry as at 30 July 2021.[22]

49. On 3 September 2021, the secretariat notified Parties[23] that in order to ensure that COP 26 has before it the latest information available, the secretariat will issue an update of the key findings of the report shortly before its start, by 25 October 2021. The update of the key findings of the synthesis report contained in this document takes into account new or updated NDCs submitted to the secretariat between 31 July and 12 October 2021.

B. Scope

50. This is an update of the key findings of the NDC synthesis report being prepared for COP 26. It synthesizes information from the 165 latest available NDCs, representing all 192 Parties to the Paris Agreement,[24] recorded in the interim NDC registry as at 12 October 2021.[25, 26] The three technical addenda referred to in paragraph 48 above could not be updated owing to the limited time available for the preparation of the update.

51. The 165 NDCs comprise 116 new or updated NDCs from 143 Parties[27] and 49 NDCs from Parties that have not communicated new or updated NDCs in response to paragraphs 23–24 of decision 1/CP.21.

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[21] Available at https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs/nationally-determined-contributions-ndcs/ndc-synthesis-report.

[22] FCCC/PA/CMA/2021/8 and Add.1–3. Available at https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs/nationally-determined-contributions-ndcs/ndc-synthesis-report.

[23] The message to Parties is available at https://unfccc.int/documents/306494.

[24] The European Union and its 27 member States communicated one joint NDC in accordance with Article 4, paras. 16–18, of the Paris Agreement, which for this report has been counted as one NDC representing 28 Parties.

[25] A list of the NDCs covered by this version of the NDC synthesis report is available at https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement/nationally-determined-contrinutions-ndcs/NDC-submissions.

[26] Between 13 and 25 October 2021 the secretariat received new/updated NDCs from a number of Parties: Bahrain, Chad, Ghana, Japan (full version following up on the interim version submitted on 12 October 2021), Nauru, Pakistan (full version following up on the abridged version submitted on 12 October 2021) and Saudi Arabia. The secretariat also received an NDC submission from Iraq, which, at the time of the preparation of this report, was not a Party to the Paris Agreement. These NDC submissions have not been considered in this update.

[27] Albania, Andorra, Angola, Antigua and Barbuda, Argentina, Armenia, Australia, Bangladesh, Barbados, Belarus, Belize, Benin, Bhutan, Bosnia and Herzegovina, Brazil, Brunei Darussalam, Burkina Faso, Burundi, Cabo Verde, Cambodia, Cameroon, Canada, Chile, Colombia, Congo, Costa Rica, Cuba, Democratic People's Republic of Korea, Dominican Republic, Ecuador, Ethiopia, Eswatini, European Union (and its 27 member States), Fiji, Gambia, Georgia, Grenada, Guinea, Guinea-Bissau, Honduras, Iceland, Indonesia, Israel, Jamaica, Japan, Jordan, Kenya, Kuwait, Kyrgyzstan, Lao People's Democratic Republic, Lebanon, Liberia, Malawi, Malaysia, Maldives, Mali, Marshall Islands, Mauritania, Mauritius, Mexico, Monaco, Mongolia, Montenegro, Morocco, Myanmar, Namibia, Nepal, New Zealand, Nicaragua, Nigeria, North Macedonia, Norway, Oman, Pakistan (abridged), Palestine, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Qatar, Republic of Korea, Republic of Moldova, Russian Federation, Rwanda, Saint Lucia, Samoa, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Singapore, Solomon Islands, Somalia, South Sudan, South Africa, Sri Lanka, Sudan, Suriname, Switzerland, Tajikistan, Thailand, Togo, Tonga, Tunisia, Uganda, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland,

52. Under Article 4, paragraph 8, of the Paris Agreement, in communicating their NDCs, Parties are to provide the information necessary for clarity, transparency and understanding in accordance with decision 1/CP.21 and any relevant decisions of the CMA.

53. For first NDCs, including those communicated or updated by 2020, this information may cover, as appropriate, quantifiable information on the reference point (including, as appropriate, a base year); time frames and/or periods of implementation; scope and coverage; planning processes; assumptions and methodological approaches, including for estimating and accounting for anthropogenic GHG emissions and, as appropriate, removals; and how the Party considers that its NDC is fair and ambitious in the light of its national circumstances, and how it contributes towards achieving the objective of the Convention as set out in its Article 2.[28]

54. CMA 1 adopted further guidance on the information necessary for clarity, transparency and understanding of NDCs. In communicating their second and subsequent NDCs, Parties shall provide the information necessary for clarity, transparency and understanding contained in annex I to decision 4/CMA.1 as applicable to their NDCs. In addition, CMA 1 strongly encouraged Parties to provide this information in relation to their first NDC, including when communicating or updating it by 2020.[29]

55. The guidance on the information necessary for clarity, transparency and understanding is without prejudice to the inclusion of components other than information on mitigation in an NDC.[30]

C. Approach

56. The guidance on the information necessary for clarity, transparency and understanding of NDCs was used as a framework for synthesizing the relevant information contained in the communicated NDCs,[31] which was supplemented by the synthesis of other information included in the NDCs but not covered by the guidance, such as on adaptation, means of implementation necessary for NDC implementation, domestic mitigation measures,[32] and economic diversification plans and response measures.

57. The synthesis covers only the information communicated by Parties in their NDCs and the synthesized information is presented for all those Parties taken together.

58. In this report, the following terms are used to indicate the percentage of Parties whose NDCs mention particular information: “a few” for less than 10 per cent; “some” for 10–40 per cent; “many” for 41–70 per cent; “most” for 71–90 per cent; and “almost all” for more than 90 per cent.

IV. Synthesis of information contained in nationally determined contributions

A. Overview

59. This report considers the 165 latest available NDCs,[33] representing all 192 Parties to the Paris Agreement, recorded in the interim NDC registry as at 12 October 2021, covering

Ukraine, United Republic of Tanzania, United States of America, Uruguay, Vanuatu, Viet Nam, Zambia and Zimbabwe.

[28] Decisions 1/CP.21, para. 27; and 4/CMA.1, para. 9.

[29] Decision 4/CMA.1, paras. 6–10 and annex I.

[30] Decision 4/CMA.1, para. 8.

[31] As per decision 1/CP.21, para. 25.

[32] In this report, (domestic) mitigation measures refers to specific policies and actions that contribute to achieving mitigation objectives identified in NDCs, including adaptation actions and economic diversification plans with mitigation co-benefits.

[33] The NDC of the European Union has been counted as reflecting the inclusion of particular information by its 27 member States.

94.1 per cent of total global emissions in 2019, which are estimated at 52.4 Gt CO_2 eq[34] without LULUCF (and around 56.0 Gt CO_2 eq with LULUCF[35]).

60. Almost all Parties provided the information necessary for clarity, transparency and understanding of their NDCs in accordance with Article 4, paragraph 8, of the Paris Agreement and decision 1/CP.21, paragraph 27. Of the Parties that submitted new or updated NDCs, almost all provided such elements of information, already applying the CMA guidance referred to in paragraph 54 above.

61. Most Parties provided information on adaptation, with a few identifying the adaptation component of their NDC as their adaptation communication, and a few provided information organized around the elements identified in the annex to decision 9/CMA.1.

62. In addition, almost all Parties provided other information, such as on the means of implementation necessary for NDC implementation; domestic mitigation measures; and/or economic diversification plans and response measures.

B. Scope and coverage

63. All Parties provided information on mitigation targets or mitigation co-benefits resulting from adaptation actions and/or economic diversification plans in their NDCs (see figure 1), which range from economy-wide absolute emission reduction targets to strategies, plans and actions for low-emission development, to be implemented within a specified time frame or implementation period:

(a) Some Parties included absolute emission reduction targets expressed as an emission reduction from the level in a specified base year, ranging from 7.2 to 88.0 per cent. A few other Parties specified a year or time frame in which their emissions are expected to peak or reach a maximum level of absolute emissions (e.g. by 2030). In addition, a few of these Parties expressed their target as a carbon budget in addition to the absolute target, establishing an overall limit on GHGs to be emitted over a specified period of time (e.g. between 2021 and 2030);

(b) Many Parties included relative targets for reducing emissions below the 'business as usual' level by a specified target year, either for the whole economy or for specific sectors, ranging from 5 to 103.5 per cent and thus achieving carbon neutrality; or emission intensity targets for reducing specific GHG emissions per GDP unit relative to a base-year (e.g. 1990) level;

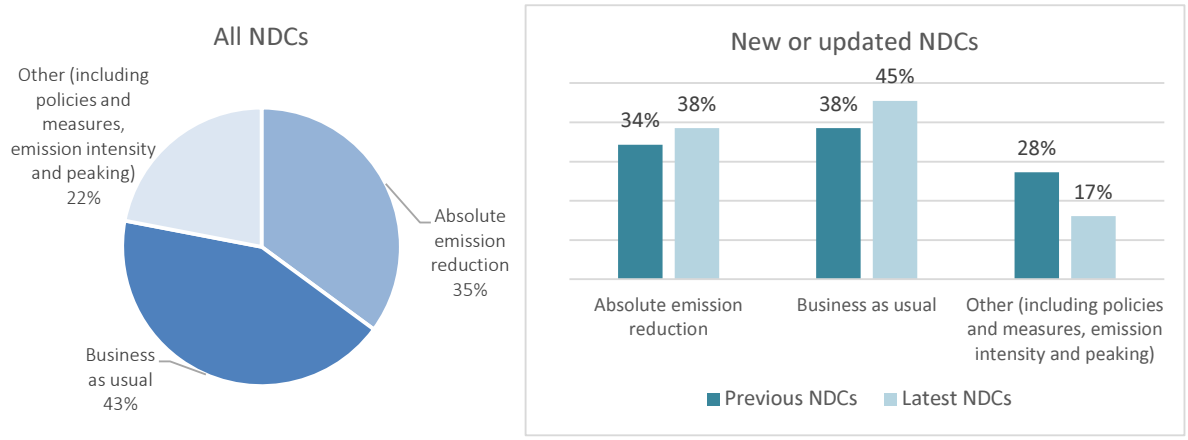
(c) Some Parties included strategies, plans and actions for low-emission development reflecting their particular national circumstances;

(d) Some Parties provided information on mitigation co-benefits resulting from their adaptation actions and/or economic diversification plans, mostly in combination with other targets.

[34] Including emissions from countries that are not Parties to the Paris Agreement, a harmonization factor to ensure comparability with SSP scenarios assessed by the IPCC, and emissions from international aviation and maritime transport, which accounted for approximately 1.2 and 1.5 per cent, respectively, of total global emissions in 2019.

[35] In line with anthropogenic land-use emissions and removals in the scenarios assessed by the IPCC, although actual directly induced net emissions from LULUCF could be higher.

Figure 1
Types of mitigation target and share of Parties that communicated them in nationally determined contributions



64. Total global GHG emission levels (without LULUCF) taking into account implementation of the latest NDCs of all Parties to the Paris Agreement are estimated to be around 54.7 (52.7–56.7) Gt CO_2 eq in 2025 and 54.9 (51.5–58.3) Gt CO_2 eq in 2030[36] (see figure 2).

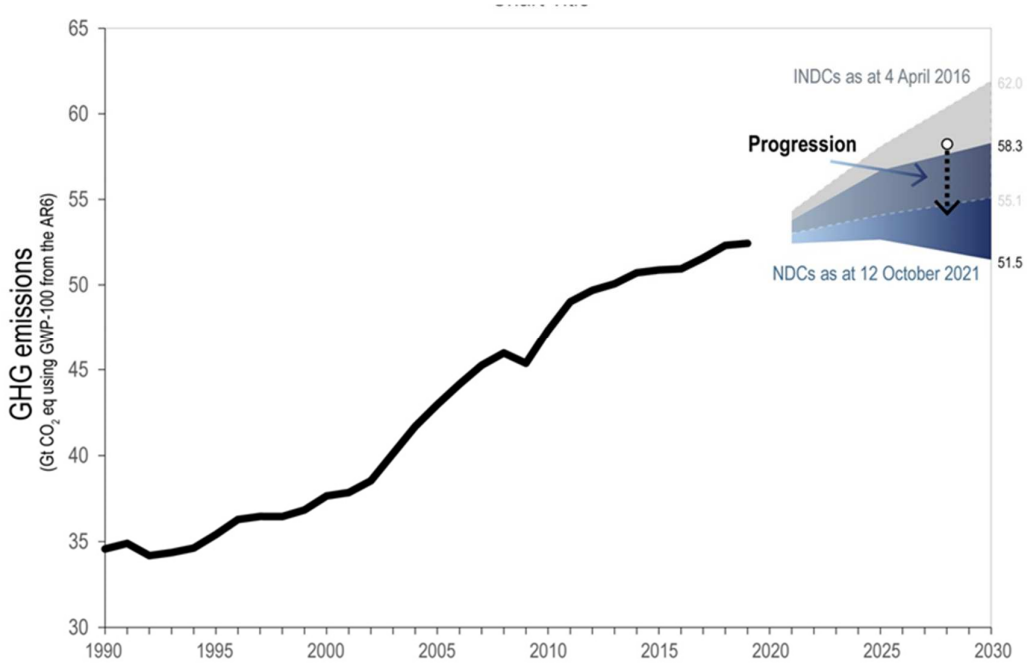
65. Most Parties' NDCs are unconditional, at least in part, with many including more ambitious conditional elements. The implementation of most conditional elements depends on access to enhanced financial resources, technology transfer and technical cooperation, and capacity-building support; availability of market-based mechanisms; and absorptive capacity of forests and other ecosystems. Total GHG emission levels resulting from implementation of the unconditional elements of the NDCs are estimated to be 55.5 (54.3–56.7) Gt CO_2 eq in 2025 and 56.4 (54.4–58.3) Gt CO_2 eq in 2030 (see figure 2).

66. When considering only the new or updated NDCs, the total GHG emissions of the relevant Parties are estimated to be around 25.6 (24.7–26.4) Gt CO_2 eq in 2025 and 23.6 (22.2–25.0) Gt CO_2 eq in 2030.

67. Of the Parties that submitted new or updated NDCs, most included unconditional components, and many included additional conditional elements. Compared with their previous NDCs, some 20 per cent more Parties included unconditional elements in their new or updated NDCs.

[36] Unless otherwise noted, in this report the average of the quantification is followed by a range that represents the minimum and maximum values after aggregation for the Parties NDCs, since several presented conditional and unconditional elements of their NDCs and, in some cases, ranges of values for both.

Figure 2
Projected range and progression of emission levels



Note: The projected ranges cover the higher-emission end for unconditional elements of NDCs to the lower-emission end when also taking conditional elements of NDCs into account. Emissions from international aviation included are assumed constant by 2030 at the 2019 level (~628 Mt CO_2); emissions from international maritime transport of 755 Mt CO_2 eq in 2018 are assumed to be on a linear trajectory by 2030 towards the international maritime sector's target of halving emissions by 2050 compared with the 2008 level. The comparison of total emissions resulting from implementation of the INDCs and the latest NDCs includes the difference in assumed bunker emissions (approximately 390 and 540 Mt CO_2 eq lower emissions in 2025 and 2030, respectively).

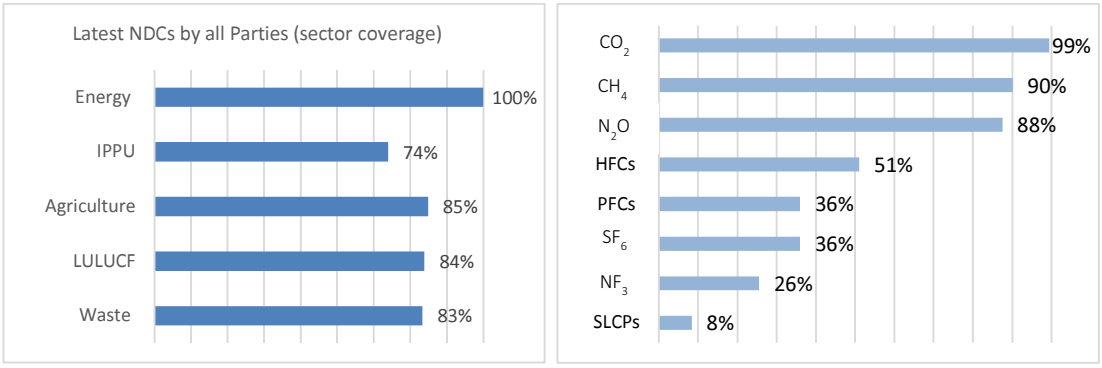
68. All Parties provided information on the scope and coverage of their NDCs, including sectors and gases covered.

69. Most Parties have economy-wide NDCs, with many covering all sectors defined in the 2006 IPCC Guidelines. All NDCs cover the energy sector, most cover agriculture, LULUCF, waste and IPPU (see figure 3).

70. Some Parties provided information on coverage of specific sectors of national importance, which are often a subset of one or more IPCC sectors, such as shipping and aviation, cooling, food production, transport, mining or buildings, while others mentioned specific carbon pools, oceans or blue carbon.

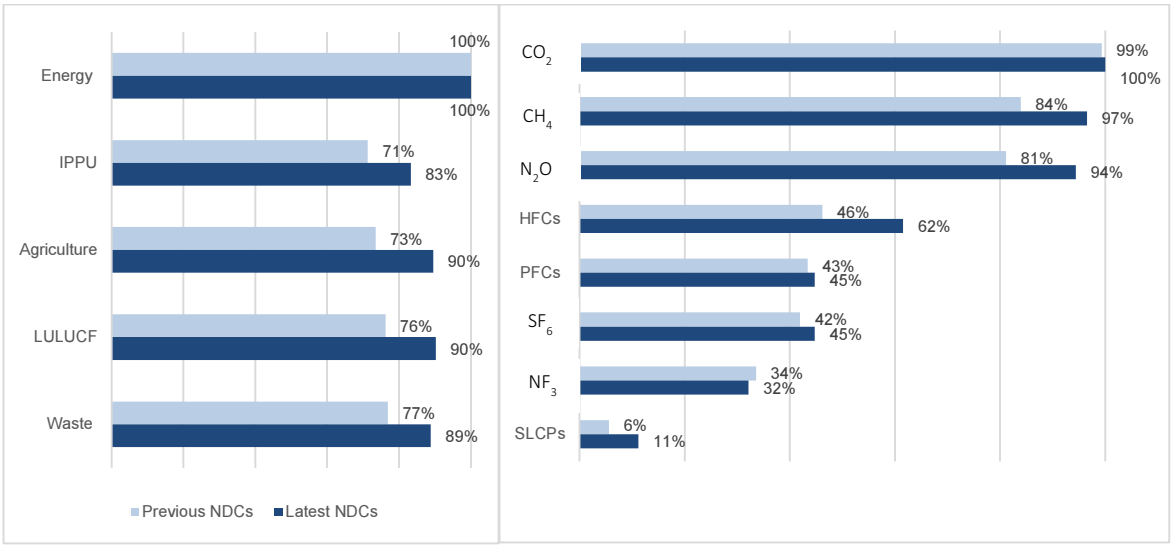
71. Almost all NDCs cover CO_2 emissions, most cover CH_4 and N_2O emissions, many cover HFC emissions and some cover PFC, SF_6 and NF_3 emissions. Some Parties included additional gases or emissions, including short-lived climate pollutants, such as black carbon, sulfur dioxide and non-methane volatile organic compounds (see figure 3).

Figure 3
Sectors and greenhouse gases covered in nationally determined contributions



72. The coverage of sectors and gases has increased in the new or updated NDCs compared with the Parties' previous NDCs, covering 99.0 per cent (25.5 Gt CO_2 eq) of the Parties' total economy-wide emissions in 2019, up from 97.3 per cent (25.1 Gt CO_2 eq) previously, resulting in most Parties having economy-wide NDCs, covering all 2006 IPCC Guidelines sectors (see figure 4).

Figure 4
Sectors and greenhouse gases covered by Parties that submitted new or updated nationally determined contributions



73. Most Parties provided information on how they are striving to include all categories of anthropogenic emissions and removals in their NDCs over time, as well as explanations for the exclusion of any categories. Some Parties stated that they already have economy-wide NDCs including all sectors and GHGs. Some other Parties explained why certain sectors and/or gases had been excluded, such as owing to categories being negligible or insignificant, data unavailability or inaccuracy, or lack of technical capacity.

74. In addition to communicating information on mitigation targets or plans for the near to medium term, many Parties provided information on long-term mitigation visions, strategies or targets for up to and beyond 2050 that either have already been formulated or are under preparation. Of those Parties, most referred to climate neutrality, carbon neutrality, GHG neutrality or net zero emissions by 2030, 2040, 2050, 2060 or mid-century.[37, 38]

[37] As at 12 October 2021, 33 Parties had communicated LT-LEDS, 32 of which had communicated a new or updated NDC; see https://unfccc.int/process/the-paris-agreement/long-term-strategies.
[38] See document FCCC/PA/CMA/2021/8/Add.3 for additional information on long-term goals.

C. Time frames and/or periods of implementation

75. All Parties communicated in their NDCs the time frame and/or period of implementation, which refers to a time in the future by or in which an objective is to be achieved.

76. Almost all Parties communicated a time frame and/or period of implementation of until 2030, while a few specified periods of until 2025, 2035, 2040 or 2050. Many Parties indicated 1 January 2021 as their starting date for NDC implementation; some started implementing their NDC in or before 2020; and a few Parties will start doing so from 2022.

77. All Parties communicated a target year, expressing a single-year target, a multi-year target (i.e. for a period of consecutive years) or multiple target years (i.e. several non-consecutive target years) depending on the target.

78. Most Parties communicated a single-year target for 2030, while a few indicated a single-year target for 2025, 2035 or 2040. A few Parties communicated multiple target years, including when target years were associated with the implementation of different policies and measures. A few other Parties indicated having a multi-year target for NDC implementation.

D. Quantifiable information on the reference point (including, as appropriate, a base year)

79. Most Parties provided quantified mitigation targets, expressed as clear numerical targets, while some included strategies, plans and actions as referred to in Article 4, paragraph 6, of the Paris Agreement or policies and measures as components of their NDCs for which there is no quantifiable information (see para. 63 above).

80. Most Parties also provided information on the reference year, base year, reference period or other starting point for measuring progress towards the target. Most of those Parties are measuring the achievement of their targets against a base-year level, with many selecting 1990 and others selecting a year between 2000 and 2020. Some have chosen to measure progress in terms of a deviation from a level in the target year, with most selecting 2030; and a few provided a reference period.

81. Almost all Parties further provided information on the reference indicator used to express their target. Most of those Parties chose as the reference indicator absolute GHG emissions, some the 'business as usual' GHG emission level, a few a GHG emission budget, and a few others emission intensity per GDP unit or sectoral 'business as usual' levels. Most Parties provided a quantified value for their reference indicator for either the base year, the target year or both, as appropriate.

82. Of the Parties that submitted new or updated NDCs, most updated the basis for defining their targets, including reference points and 'business as usual' scenarios. Although such updates lead to higher-quality NDCs, for some Parties they lead to significant changes in the estimated emission levels for 2025 and 2030, for reasons other than changes to target levels.

83. Most Parties that included strategies, plans and actions as referred to in Article 4, paragraph 6, of the Paris Agreement provided other information for clarification, including on expected levels of emission reduction or prevention, increased forest coverage, reduction of deforestation, energy efficiency targets, renewable energy share or other non-GHG policy targets.

84. Most Parties provided information on the sources of the emission data used for quantifying the reference point, many referring to national inventory reports and many to biennial reports, biennial update reports and/or national communications. Some Parties also referred to national documents and statistics, such as sector activity reports; national development plans and/or strategies; economic development projections; national climate change plans; energy master plans; national statistics on economy, energy and/or trade; waste

management strategies; national resource plans; energy road maps; national forest reports; and socioeconomic forecasts.

85. Many Parties presented information on the circumstances in which they may update the values of their reference indicators, such as owing to significant changes in specific financial, economic, technological and/or political conditions, or to impacts due to extreme natural disasters; or depending on scale of access to support and other means of implementation, expected improvements or modifications to activity data, variables or methodologies used in estimating national emissions, baselines or projections, or the results of the ongoing negotiations on common metrics; or to reflect the actual situation during the implementation period.

E. Assumptions and methodological approaches, including for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals

1. Intergovernmental Panel on Climate Change methodologies and metrics

86. Most Parties communicated information on the IPCC methodologies they used for estimating emissions and removals. Many referred to the 2006 IPCC Guidelines and some to the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*, while a few others mentioned that they used both sets of guidelines to cover different sectors.

87. Many Parties provided information on the metrics they used for estimating emissions and removals. Many of them used GWP values over a 100-year time-horizon from the AR5, while some used such values from the AR2 and some those from the AR4. A few Parties used GWP values as well as global temperature potential values from the AR5 for estimating their mitigation targets.

88. Most Parties also communicated information on the assumptions and methodological approaches to be used for accounting anthropogenic GHG emissions and, as appropriate, removals, corresponding to their NDCs. Most of them referred to the 2006 IPCC Guidelines, while some others referred to the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories* or the *2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories*. Some also mentioned the IPCC *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories* and/or the IPCC *Good Practice Guidance for Land Use, Land-Use Change and Forestry*.

89. In addition, some Parties also referred to the standard methods and procedures contained in the *2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol* and the *2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands*.

2. Assumptions and methodological approaches

90. Many Parties expressed mitigation targets as a deviation from a 'business as usual' level, with most presenting quantitative baselines and mitigation scenarios and most providing updated information on the assumptions and approaches used to develop 'business as usual' scenarios, baselines or projections, such as baselines and projections being based on historical data and trends in emissions and economic parameters. Most of those Parties referred to key parameters and variables such as GDP and population and growth thereof, and cost–benefit analysis. They also provided sector-specific parameters, including energy consumption, energy demand and production, electricity grid capacity, urbanization rate, transportation network changes and vehicle numbers, forest growth rate, livestock trends, per capita waste generation, and energy and waste statistics per tourist.

91. A few Parties communicated additional information on other approaches used for estimating sector- or activity-specific emissions or baselines, including using regional data sources for downscaling data or generating data at the national level, and calculation tools or approaches for estimating short-lived climate pollutants or precursor emissions. Some Parties mentioned using specific modelling tools for estimating their emissions or baselines, such as The Integrated Market Allocation-Energy Flow Optimization Model System, Long-range

Energy Alternatives Planning, the Greenhouse Gas Abatement Cost Model, Green Economy Modelling, the PROSPECTS+ emissions scenario tool and the Ex-Ante Carbon-balance Tool.

92. Of the Parties that submitted new or updated NDCs, almost all provided more detailed information than previously on the assumptions, methodological approaches and procedures used for developing their baselines or mitigation scenarios.

3. Land use, land-use change and forestry

93. Some Parties consider addressing emissions and subsequent removals due to natural disturbances on managed land if such events occur. Almost all of them mentioned that they may use a statistical approach to identifying natural disturbances following relevant IPCC guidance.

94. Some Parties stated that emissions and removals from harvested wood products will be accounted for as part of their NDCs, with almost all indicating that they will use the production approach.

95. Some Parties mentioned that the effects of age-class structure in forests will be taken into account when estimating the mitigation contribution of forests by using a projected forward-looking forest reference level taking into account current management practices.

4. Voluntary cooperation under Article 6 of the Paris Agreement

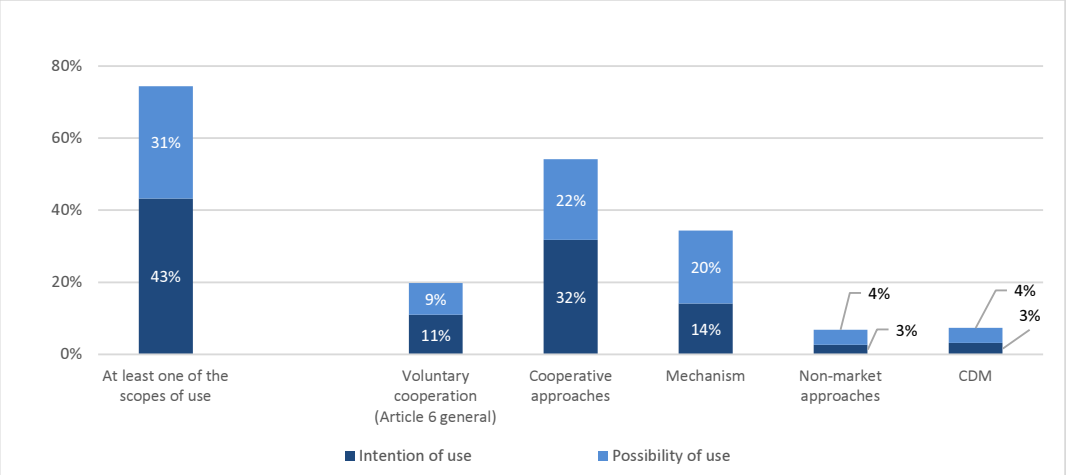
96. Most Parties provided information relating to voluntary cooperation. Almost all of them communicated that they plan to or will possibly use voluntary cooperation in at least one of its scopes in implementing their NDCs (see figure 5) by directly or indirectly[39] referring to the scopes in their NDCs: general use of voluntary cooperation under Article 6; use of cooperative approaches under Article 6, paragraph 2; use of the mechanism under Article 6, paragraph 4; use of non-market approaches under Article 6, paragraph 8; and use of the CDM.[40] The share of Parties that indicated that they plan or will possibly use voluntary cooperation in at least one of its scopes has increased from 46 to 85 per cent in the new or updated NDCs compared with those Parties' previous NDCs.

97. Many Parties communicated planned or possible use of cooperative approaches, followed by planned or possible use of the mechanism. Some mentioned that they plan to or will possibly make general use of voluntary cooperation, a few Parties indicated that they plan to or will possibly use the CDM, and a few referred to non-market approaches.

[39] In this report, indirect references include international cooperation under Article 6, market-based mechanisms and non-market mechanisms.

[40] Only direct references to use of the CDM were considered: an indirect reference to the CDM such as "international market-based mechanisms" was not considered a reference to the CDM.

Figure 5
Share of Parties indicating in nationally determined contributions the intention to use or possibility of using specific scopes of voluntary cooperation



98. Some Parties communicated the use of voluntary cooperation as a condition for achieving their mitigation targets.

99. On the other hand, some Parties have set limits on their use of voluntary cooperation: a few have limited their use of voluntary cooperation to achieving their conditional mitigation targets only; a few have set quantitative limits on their use of voluntary cooperation for achieving their mitigation targets, such as achieving unconditional targets primarily through domestic efforts but partially through voluntary cooperation; and some have set qualitative limits on their use of voluntary cooperation for achieving their mitigation targets, such as using units that adhere to standards and guidelines to ensure additionality, permanence or avoidance of double counting of emission reductions. The share of Parties that have set qualitative limits on their use of voluntary cooperation has increased, from 20 to 36 per cent, in the new or updated NDCs compared with those Parties' previous NDCs.

F. Planning and implementation processes

100. Almost all Parties provided information on their NDC planning processes and most also referred to their implementation plans, communicating information on their institutional arrangements, stakeholder engagement processes and policy instruments, including legislation, strategies, plans and policies.

1. Domestic institutional arrangements

101. Most Parties indicated that domestic institutional arrangements are a key element of coordinating, planning and implementing climate change policy and action at the national and international level and fostering public participation. Most of them referred to specific arrangements in place for NDC preparation, such as inter-institutional commissions, councils and committees, led by a designated entity with a coordination role and including members from public entities, the private sector, non-governmental organizations and/or academia. A few other Parties communicated that such arrangements are under development.

102. Most Parties referred to formal arrangements in place for consulting various stakeholders, including the general public, local communities, indigenous peoples, private entities, business and trade associations, civil society organizations, youth associations, women's associations, regional development partners, academia and research communities. Almost all of those Parties indicated that they conducted such consultation and engagement processes in an inclusive and participatory manner. Some of these Parties specifically referenced gender-sensitive consultations, referring to specific guidelines for ensuring gender sensitivity, such as during public consultations, and highlighting the inclusion of national gender machineries, gender and women's groups, or non-governmental organizations in the process.

103. A few Parties mentioned the Marrakech Partnership for Global Climate Action,[41] which, under the leadership of the high-level champions, supports implementation of the Paris Agreement by strengthening collaboration between national Governments and cities, subnational regions, businesses, investors and civil society to accelerate action on climate change. In this context, some of those Parties also highlighted the voluntary commitments announced or pledged in collaboration with non-Party stakeholders.[42]

104. Many Parties mentioned specific policy instruments in place to facilitate NDC implementation in addition to institutional arrangements, and some others mentioned instruments being under development. Such policy instruments include energy and/or climate strategies, low-emission development strategies, NDC implementation road maps, NDC action plans, laws and regulations on climate change, sectoral national mitigation and adaptation plans and NDC investment plans.

105. Some Parties included information on their domestic measurement, reporting and verification systems, while many others indicated that such systems are under development. Those Parties acknowledged the important role of such systems in continuously monitoring and tracking the status and progress of their NDCs and mitigation efforts, and highlighted that the results will be reflected in national inventory reports and/or biennial transparency reports, ensuring national and international transparency. A few Parties also highlighted that the feedback from such systems will be used to guide the preparation of their subsequent NDCs.

2. Gender

106. Most Parties provided information related to gender in their NDCs and some affirmed that they will take gender into account in implementing them.[43]

107. Of the Parties that provided gender-related information, most referred to relevant policies and legislation or affirmed a general commitment to gender equality, while some included information on how gender had been or was planned to be mainstreamed in NDC implementation, and some on specific tools and methods, such as gender analyses or assessments, gender indicators, gender-disaggregated data, and gender-responsive budgeting, and a few included gender as a criterion for prioritizing activities.

108. Many Parties that referred to gender in their NDCs treated it as a cross-cutting issue to be addressed across adaptation and mitigation, with some focusing on adaptation. Some Parties considered gender exclusively in the context of adaptation. Some Parties mentioned taking gender into account in formulating and implementing their NAPs.

109. Many Parties referred to their planned gender-sensitive or gender-responsive climate action or generally elaborated on gender aspects in the context of specific sectors, including in the context of agriculture, energy, disaster, water, health, land use and forestry, fisheries, waste and education.

110. Some Parties highlighted the importance of providing capacity-building, finance and technology for gender-specific action and of these means of implementation being gender-responsive.

111. Some Parties implicitly or explicitly considered gender as it intersects with other social factors. Some Parties explicitly considered specific genders in the context of their differentiated needs and perspectives and the gender-differentiated impacts of and contributions to climate change and climate action. Most of them framed women as being vulnerable and some framed women as stakeholders or agents of change. A few Parties explicitly considered other genders.

[41] See https://unfccc.int/climate-action/marrakech-partnership-for-global-climate-action.

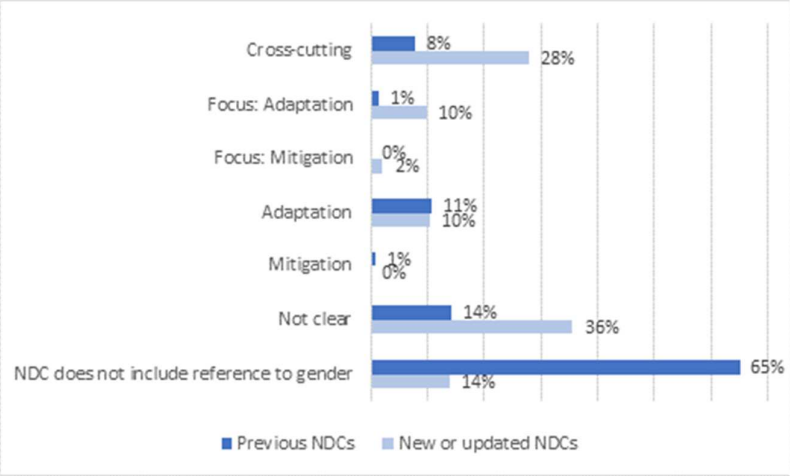
[42] Voluntary commitments by Parties and non-Party stakeholders are reported and tracked in order to capture the extent of climate action taken globally on the global climate action portal (https://climateaction.unfccc.int/) and in the Yearbook of Global Climate Action (see, e.g., https://unfccc.int/sites/default/files/resource/2020_Yearbook_final_0.pdf).

[43] For more information on gender under the UNFCCC, see https://unfccc.int/topics/gender/workstreams/chronology-of-gender-in-the-intergovernmental-process.

112. Parties are increasingly considering gender in their NDCs and recognizing gender integration as a means of increasing the ambition and effectiveness of their climate action. The share of Parties referring to gender in the new or updated NDCs compared with their previous NDCs has increased significantly and the share of Parties considering gender as a cross-cutting issue has also risen (see figure 6).

113. Most Parties referenced gender in their first NDCs or for the first time in their new or updated NDCs, and many elaborated more on gender than in their previous NDCs, while a few considered gender to a similar or decreased extent.

Figure 6
Reference to gender in nationally determined contributions



3. Indigenous peoples and local communities

114. Some Parties described the role of indigenous peoples and local communities in the context of their NDCs, including the situation and consideration of the rights of indigenous peoples at the national level, such as legal and consultative arrangements for protecting their rights. They emphasized the vulnerabilities of indigenous peoples relating to their intrinsic relationship with forests and ecosystems and conditions of poverty. The benefits of drawing on indigenous knowledge and expertise, in particular for adaptation, were highlighted, as was the importance of combining traditional and modern practices and of ensuring the participation and leadership of indigenous peoples in climate efforts. Parties outlined how indigenous peoples were engaged in NDC preparation, including through consultations on sectoral proposals, risk assessment and analysis of indigenous knowledge.

115. In addition, some of those Parties elaborated on how actions identified in the NDC aim to benefit indigenous peoples by, for example, enhancing access to finance and technology; building capacities for reducing vulnerabilities as well as for leadership, negotiations and indigenous-led climate action; generating payments for ecosystems services; providing development opportunities; enhancing market access to indigenous products; and diversifying livelihoods. A few Parties specifically elaborated on the role of local communities in climate action, highlighting the importance of empowering such communities, building their capacity to adapt and ensuring their participation in related activities, such as through community-based adaptation plans, decentralization strategies and livelihood improvements, as well as through adaptation measures, such as mangrove restoration, that enhance the resilience of local communities to climate change.

4. Action for Climate Empowerment[44]

116. Almost all Parties provided information on using one or more ACE elements to promote implementation of mitigation and adaptation activities. Some Parties indicated their

[44] ACE denotes work under Article 12 of the Paris Agreement; its objective is to empower all members

intention, and the support needed, to systematically address ACE by developing national ACE strategies, incorporating ACE and its elements into general climate policies and plans, upholding ACE as a guiding principle and cross-cutting priority for climate action, and setting specific ACE-related targets.

117. Many Parties elaborated on climate education measures such as updating formal, informal and non-formal education curricula and programmes, establishing laws and policies to ensure provision of climate education, mainstreaming climate change in national education strategies and plans, and providing training and resources for teachers and educators. Many Parties included information on training measures, including integrating climate change into training programmes for civil servants and other stakeholders.[45] The need for training was also highlighted in the context of achieving just transition and accessing green jobs.

118. Many Parties provided information on measures for raising public awareness, such as developing communication strategies, disseminating knowledge through traditional and new media, and implementing awareness-raising campaigns for specific sectors, such as health, biodiversity and energy efficiency. Most Parties mentioned public participation, including information on institutional arrangements (see paras. 101–105 above). Some Parties included information on public access to information, providing details on developing regulations and systems to guarantee and facilitate access to climate information and data.

119. In the new or updated NDCs, Parties generally communicated more clearly, and in more detail, than previously on general principles, past achievements, future commitments, and needs and gaps in relation to ACE. More Parties are explicitly referring to ACE as a necessary means of mobilizing and empowering society to deliver the mitigation and adaptation objectives outlined in their NDCs.

5. Best practices and other contextual matters

120. Many Parties communicated best practices for NDC preparation, such as institutionalizing climate policy development within joint planning frameworks; strengthening stakeholder capacity to participate more substantively in NDC preparation and implementation; designing planning and reporting systems for transparency and public scrutiny; incorporating experience and lessons learned from INDC preparation and implementation efforts; conducting extensive stakeholder consultation and peer review to enhance their understanding of the NDC; conducting a preliminary assessment of pre-2020 efforts to identify gaps and needs and develop an NDC road map; mainstreaming NDC goals in existing strategies, plans and policies to obtain political support and benefit from existing arrangements; partnering with regional and international organizations to develop a robust NDC; and establishing a scientific and quantitative system for analysing and assessing progress of implementation.

121. Although the first global stocktake will not be conducted until 2023, on the basis of their national circumstances and development pathways, many Parties highlighted other contextual aspirations and priority areas, such as maximizing synergies between short- and long-term climate commitments and the SDGs; adaptation and climate-resilient development; collaboration and support by developed country Parties and international organizations; deploying low-emission technologies to drive emission reduction, safeguarding food security and eradicating poverty; involving youth, local governments and communities and/or indigenous groups in a gender-responsive manner; just transition of the workforce; social and climate justice; circular economy; integrated resource management; oceans or blue carbon; disaster risk reduction; human health; energy production from renewable sources and/or energy efficiency; and reducing risks caused by loss and damage.

122. Of the Parties that submitted new or updated NDCs, some provided information on how their NDC preparation was informed by activities or events relevant to the collective

of society to engage in climate action through education, training, public awareness, public participation, public access to information, and international cooperation on these issues (the six ACE elements).

[45] See paras. 202–205 below for more information on training measures in the context of capacity-building.

assessment of progress in addressing climate change, such as the United Nations Secretary-General's calls to strengthen climate action and ambition during the 2018 high-level event on climate change, the recommendations from the Talanoa Call for Action, and/or the best available science, such as the SR1.5.[46]

G. Mitigation co-benefits resulting from adaptation action and/or economic diversification plans

123. Some Parties considered mitigation co-benefits resulting from their adaptation action and/or economic diversification plans and a few mentioned that such co-benefits have been taken into account in their mitigation efforts. Many of those Parties considered social and economic consequences of response measures and included an economic diversification plan and/or a just transition or social pillar for designing climate policies that foster a just and equitable transition, and managing changes arising in relevant sectors due to the implementation of climate policies. Some other Parties considered positive and/or negative economic and social consequences of response measures without linking them to the mitigation co-benefits of their adaptation action and/or economic diversification plans. Some Parties presented their sectoral mitigation and adaptation plans in agriculture, energy, forestry, tourism and transport sector as transition or diversification plans.

124. The Parties highlighted unequal impacts on different groups of society or the workforce as consequences of response measures, with impacts on the workforce[47] being the most frequently mentioned. Some plan to address such impacts by including the concept of just transition in their overall NDC implementation, such as a just transition mechanism and just transition funds; laws and strategies for protecting workers; a social mechanism for job creation, skills development and employment policies; and a consultation process for social protection. A few Parties paid special attention to addressing impacts of response measures on vulnerable groups and communities in relation to poverty, job opportunities and inequality during transition.

125. Some Parties considered economic diversification as part of their national development plans and climate policies to boost the country's resilience to climate change and response measures. A few of them linked such plans to an existing poorly diversified economy and the impact of response measures on sectors of high economic importance, such as extraction of fossil fuels. Those Parties specifically mentioned economic diversification plans or actions focused on high-emitting sectors and sectors of economic importance. Such plans include enhancing education; increasing the share of energy generation using renewable sources; improving energy efficiency through regulatory measures, pricing signals and technology deployment in the fisheries, industry and buildings sectors; carbon dioxide capture and storage in the oil and gas industry; implementing fuel switch and fuel price reforms in the transport sector; moving to circular economy for better waste management; and adopting sustainable tourism practices to build the tourism sector.

126. Some Parties described how their adaptation action contributes to emission reduction, including their intention to consider mitigation co-benefits in NAP formulation. In terms of sectors, some described the potential co-benefits of various agricultural adaptation measures, including climate-smart agriculture, reducing food waste and vertical farming. Adaptation of coastal ecosystems was highlighted as another source of co-benefits, in particular planting mangroves and seagrass beds. Other sectors with potential co-benefits mentioned were forestry, natural resources and the environment, energy and waste.

127. Most Parties identified agriculture as a high priority for adaptation, either explicitly or as part of cross-sectoral adaptation efforts, and most are aiming to use mitigation

[46] IPCC. 2018. *IPCC Special Report on the Impacts of Global Warming of 1.5 °C above Preindustrial Levels and Related Global Greenhouse Gas Emission Pathways in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty.* V Masson-Delmotte, P Zhai, H-O Pörtner, et al. (eds.). Geneva: World Meteorological Organization. Available at https://www.ipcc.ch/sr15/.

[47] Such as low-income groups, women, young people, indigenous peoples and people with disabilities.

opportunities in the sector. Many Parties highlighted the need to focus on activities that have positive effects on mitigation and adaptation while ensuring food security.

H. Fairness and ambition in the light of national circumstances

128. Almost all Parties explained, using different metrics, how they consider their NDCs to be fair and ambitious in the light of their national circumstances.[48]

129. Those Parties included qualitative and/or quantitative information on how their NDCs represent progression[49] and highest possible ambition, such as through increased estimated level of emission reductions; earlier projected peaking of emissions; enhancing mitigation efforts; increasing unconditional elements; including long-term targets; introducing and/or enhancing policies; elaborating on adaptation action; integrating climate goals into national policy instruments; enhanced linkages with the SDGs; using more accurate data and moving to higher-tier estimation; establishing arrangements for monitoring and/or tracking progress of implementation; enhancing the stakeholder consultation process; developing sector-based action plans for implementation; and presenting additional information to facilitate clarity, transparency and understanding.

130. Many Parties framed fairness consideration within their past, current and future share in global and/or per capita emissions compared with global averages, or in relation to the trends in one or several metrics. Of the Parties that communicated new or updated NDCs, some indicated that, despite COVID-19 and its impacts on their economies, they are committed to implementing their NDCs to address climate change.

131. Many Parties provided information on ambition by linking their NDCs to their commitment to transition to a sustainable and/or low-carbon and resilient economy; some expressed that they have incorporated their NDC goals and policies into national legislative, regulatory and planning processes as a means of ensuring implementation; some addressed ambition in the context of the inclusive design of their NDCs, considering various cross-cutting aspects, such as investment plans, gender-responsiveness, education and just transition.

132. Many Parties expressed that their NDCs are in line with the long-term goals of the Paris Agreement or with the mitigation pathways for limiting global warming to well below 2 or 1.5 °C above pre-industrial levels. Of the Parties that communicated new or updated NDCs, most highlighted that they have enhanced their mitigation and/or adaptation contributions.

133. Total global GHG emission levels (without LULUCF) taking into account implementation of the latest NDCs of all Parties to the Paris Agreement are estimated to be around 1.4 Gt CO_2 eq, or on average 2.6 per cent, by 2025 and 3.6 Gt CO_2 eq, or on average 6.2 per cent, by 2030 below the levels indicated in the INDCs as at 4 April 2016.

134. When compared with implementation of the previous NDCs of Parties that had submitted new or updated NDCs as at 12 October 2021, implementation of their new or updated NDCs is estimated to result in a lower level of emissions by 3.7 (3.3–4.1) per cent in 2025 and 11.0 (10.1–12.0) per cent in 2030.

[48] Metrics include capabilities; historic and current responsibility; climate justice; share in global emissions; level of per capita emissions; vulnerability to the adverse impacts of climate change; development and/or technological capacity; mitigation potential; cost of mitigation actions; degree of progression or progression beyond the current level of effort; and link to objectives of the Paris Agreement and its long-term global goals.

[49] In this report, the term "progression" is used to refer to the difference between the estimated emission levels associated with implementation of Parties' INDCs communicated to the secretariat as at 4 April 2016 and those according to the NDCs available in the interim NDC registry as at 12 October 2021. In the figures in this report the progression is shown from INDCs as at 4 April 2016 (grey shading), covered in document FCCC/CP/2016/2, to NDCs as at 12 October 2021 (blue shading), aggregated in this report.

I. Contribution towards achieving the objective of the Convention as set out in its Article 2, and towards Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement[50]

135. The information necessary to facilitate clarity, transparency and understanding of NDCs includes information on:[51]

(a) How the NDC contributes towards achieving the objective of the Convention as set out in its Article 2;

(b) How the NDC contributes towards Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement.

136. Almost all Parties communicated information on the contribution of their NDCs towards achieving the objective of the Convention as set out in its Article 2, and towards Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement.

137. Many Parties indicated that their level of emissions in the future is expected to fall within the scope of a global emission pathway that is consistent with the goal of keeping the global average temperature increase below 2 or 1.5 °C.

138. In that context, Parties highlighted their national mitigation and/or adaptation efforts, NDC targets, LT-LEDS, development pathways for decoupling emissions from economic growth, and mobilization of domestic and international support.

139. The projected total GHG emission level in 2025 is 58.1 per cent higher than in 1990 (34.6 Gt CO_2 eq), 45.2 per cent higher than in 2000 (37.7 Gt CO_2 eq), 27.2 per cent higher than in 2005 (43.0 Gt CO_2 eq), 15.5 per cent higher than in 2010 (47.4 Gt CO_2 eq), 7.5 per cent higher than in 2015 (50.9 Gt CO_2 eq) and 4.3 per cent higher than in 2019 (52.4 Gt CO_2 eq) (see figure 7).

140. For 2030, the projected total GHG emission level is 58.7 per cent higher than in 1990, 45.7 per cent higher than in 2000, 27.7 per cent higher than in 2005, 15.9 per cent higher than in 2010, 7.9 per cent higher than in 2015 and 4.7 per cent higher than 2019 (see figure 7).

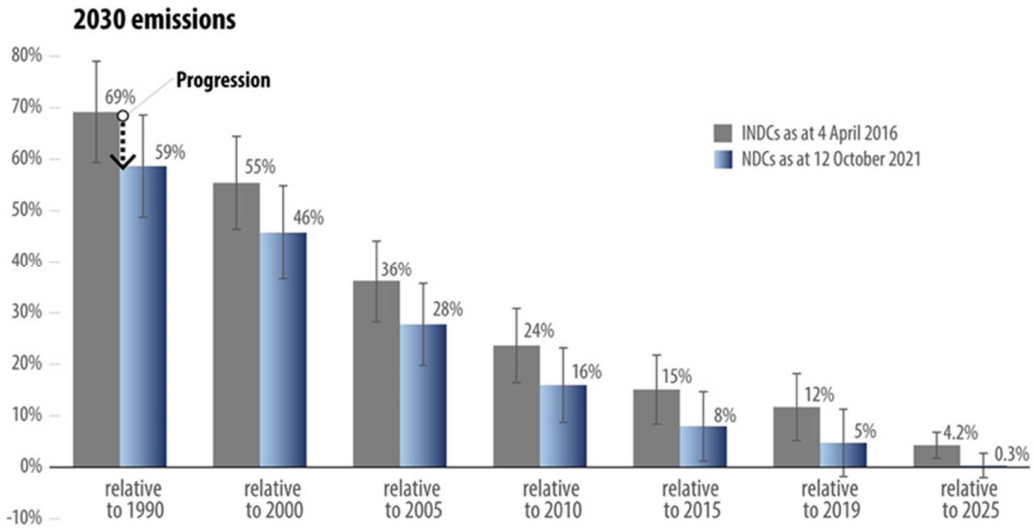
141. In comparison, the estimated total GHG emission levels for 2030 associated with implementation of Parties' INDCs implied stronger emission increases above historical levels: 69.2 (59.3–79.1) per cent above the 1990 level, 23.6 (16.4–30.9) per cent above the 2010 level and 11.6 (5.1–18.2) per cent above the 2019 level (see figure 7).

142. For Parties that communicated new or updated NDCs, their total GHG emissions are estimated to be 26.3 Gt CO_2 eq in 2019, and total GHG emission levels resulting from implementation of their NDCs are estimated to be around 25.6 (24.7–26.4) Gt CO_2 eq in 2025 and 23.6 (22.2–25.0) Gt CO_2 eq in 2030, which is about 1.5 (+1.8 to –4.8) per cent lower by 2025 and 9.0 (3.6–14.5) per cent lower by 2030 than in 2010 and 2.8 (+0.4 to –6.0) per cent lower by 2025 and 10.3 (4.9-15.6) per cent lower by 2030 than in 2019.

[50] See document FCCC/PA/CMA/2021/8/Add.3for additional information, including on estimation methods and assumptions used.

[51] Decision 4/CMA.1, annex I, para. 7.

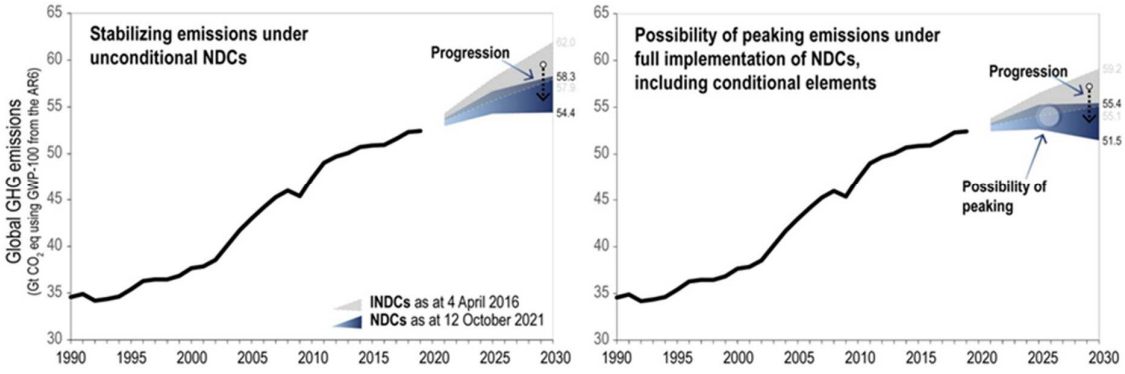
Figure 7
Projected total emission levels in 2030 compared with historical levels and the estimated 2025 level



143. The total GHG emission level resulting from implementation of the unconditional elements of the NDCs is projected to be 7.5 (3.8–11.2) per cent higher in 2030 than in 2019; whereas the total GHG emission level resulting from implementation of the NDCs including conditional elements is projected to be only 2.0 per cent (–1.8 to +5.7) higher in 2030 than in 2019, indicating, if all NDCs (including their conditional elements) are fully implemented, the possibility of peaking of global emissions before 2030, with the lower bound of the 2030 emission level (51.5 Gt CO_2 eq) estimated to be up to 1.8 per cent below the 2019 level (52.4 Gt CO_2 eq) and 2.2 per cent below the lower bound of the estimated 2025 level (52.7 Gt CO_2 eq) (see figure 8).

144. In comparison, considering the full implementation of INDCs (including their conditional elements), a continuously increasing trend in emissions was estimated up to 2030, resulting in a global emission level of approximately 9.0 (5.1–12.8) per cent above the 2019 level. Implementation of only the unconditional elements of the INDCs was estimated to result in a global emission level in 2030 of approximately 14.3 (10.5–18.2) per cent above the 2019 level (see figure 8).

Figure 8
Historical and projected total global emissions according to nationally determined contributions



Note: Emissions with LULUCF in 2030 resulting from implementation of the new or updated NDCs are estimated to be 58.9 (57.0–60.8) Gt CO_2 eq considering unconditional elements and 56.0 (54.0–58.0) Gt CO_2 eq assuming full implementation.

145. According to the latest NDCs, per capita emissions will equal 6.7 (6.5–7.0) t CO_2 eq in 2025 and, slightly lower, 6.5 (6.1–6.9) t CO_2 eq in 2030, which is, on average, 1.7 per cent lower in 2025 and 5.5 per cent lower in 2030 than in 2019.

146. Some Parties provided quantifiable information on their long-term mitigation visions, strategies and targets for up to and beyond 2050, many of which communicated LT-LEDS in response to Article 4, paragraph 19, of the Paris Agreement.[52] The total GHG emission level of those Parties is estimated to be 14.3 (13.6–14.9) Gt CO_2 eq in 2030, which is 26 (22–29) per cent below their emission level in 2010.

147. On the basis of the information provided on long-term mitigation visions, strategies and targets in the NDCs, the total emissions in 2050 of the Parties with long-term targets are estimated at 2.2–3.2 Gt CO_2 eq. Mindful of the inherent uncertainty of such long-term estimates, the information indicates that these Parties' total GHG emission level could be 83–88 per cent lower in 2050 than in 2019, with annual per capita emissions estimated at 1.0–1.4 t CO_2 eq. Global per capita emission levels by 2050 under the well-below 2 °C ("lower 2 °C") and 1.5 °C scenarios ("1.5 °C with limited overshoot") are very similar at 1.6–2.4 t CO_2 eq and 0.6–1.2 t CO_2 eq, respectively.

148. The COVID-19 pandemic was mentioned by some Parties in the new or updated NDCs, but most have not reflected the potential impacts of the pandemic in their NDCs. The longer-term effects of the related changes in national and global GHG emissions will depend on the duration of the pandemic and the nature and scale of recovery measures.

Comparison with scenarios considered by the Intergovernmental Panel on Climate Change

149. According to the SR1.5, net anthropogenic CO_2 emissions need to decline by about 45 per cent from the 2010 level by 2030 (40–60 per cent interquartile range), reaching net zero around 2050 (2045–2055 interquartile range), in order to be consistent with global emission pathways that feature no or limited temporary overshoot of the 1.5 °C warming level. The contribution of Working Group I to the AR6[53] conveyed a similar message in that the "very low GHG emissions" scenario considered is the only scenario in which warming is limited to around 1.5 °C and features net zero global CO_2 emissions around 2050. For limiting global warming to below 2 °C, CO_2 emissions need to decline by about 25 per cent from the 2010 level by 2030 on most pathways (10–30 per cent interquartile range) and reach net zero around 2070 (2065–2080 interquartile range). Deep reductions are required for non-CO_2 emissions as well.[54]

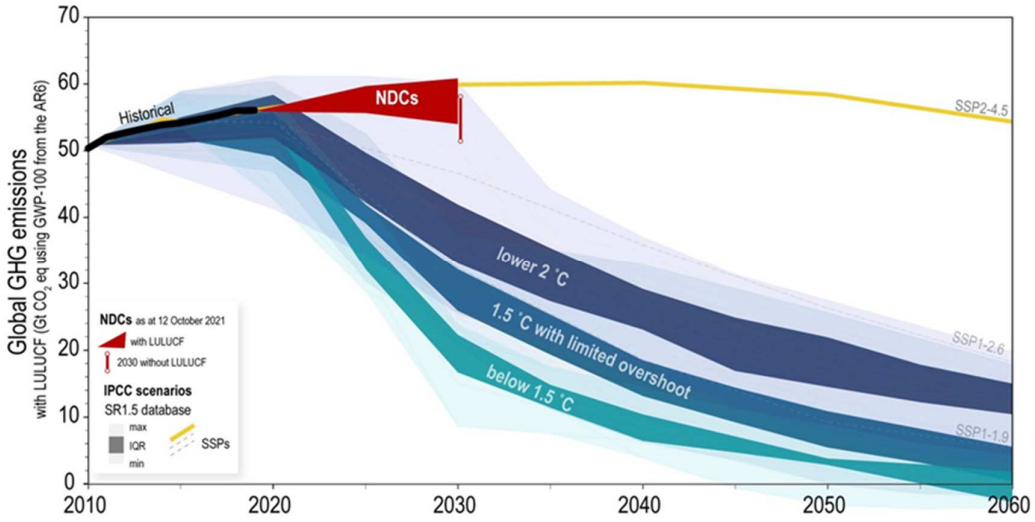
[52] As at 12 October 2021, 33 Parties had communicated LT-LEDS, 32 of which had communicated a new or updated NDC; see https://unfccc.int/process/the-paris-agreement/long-term-strategies.

[53] IPCC. 2021. *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. V Masson-Delmotte, P Zhai, A Pirani, et al. (eds.). Cambridge: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg1/.

[54] Further information on all IPCC scenarios is available at https://data.ene.iiasa.ac.at/iamc-1.5c-explorer/.

Figure 9

Comparison of global emissions under scenarios assessed in the Intergovernmental Panel on Climate Change Special Report on Global Warming of 1.5 °C with total global emissions according to nationally determined contributions



Note: The assessed global emission ranges (including LULUCF) for the IPCC scenarios provided in the SR1.5 (table 2.4) are shown with interquartile ranges. The illustrative SSP scenarios considered in the contribution of Working Group I to the AR6 are indicated (SSP2-4.5 by a yellow solid line, with an estimated end-of-century temperature of 2.7 (2.1–3.5) °C). The total GHG emission level resulting from implementation of the latest NDCs is compared with the emission levels for three of the scenario groups in the SR1.5 scenario database: a group of scenarios in which global mean temperature rise is kept at all times below 1.5 °C relative to the 1850–1900 ("below 1.5 °C"); a group of scenarios in which warming is kept at around 1.5 °C with a potential limited overshoot and then decrease of global mean temperature rise below 1.5 °C by the end of the century ("1.5 °C with limited overshoot"); and a third group that implies warming of well below 2 °C, that is above 1.5 °C by 2100 but with a likely chance of it being below 2 °C at all times ("lower 2 °C"). The latter group features scenarios with strong emission reductions in the 2020s or only after 2030.

150. The total global GHG emission level in 2030 taking into account implementation of the latest NDCs is expected to be 15.9 per cent above the 2010 level. Taken together with the information in figure 9 and paragraph 149 above, this implies an urgent need for either a significant increase in the level of ambition of NDCs between now and 2030 or a significant overachievement of the latest NDCs, or a combination of both, in order to attain cost-optimal emission levels suggested in many of the scenarios considered by the IPCC. If emissions are not reduced by 2030, they will need to be substantially reduced thereafter to compensate for the slow start on the path to net zero emissions. the SR1.5 identifies net zero CO_2 emissions as a prerequisite for halting warming at any level.

151. On the basis of the latest NDCs, cumulative CO_2 emissions in 2020–2030 are estimated to be around 444 (431–458) Gt.

152. In the context of the carbon budget consistent with 50 per cent likelihood of limiting warming to 1.5 °C, cumulative CO_2 emissions in 2020–2030 based on the latest NDCs would likely use up 89 per cent of the remaining carbon budget, leaving a post-2030 carbon budget of around 56 Gt CO_2, which is equivalent to the average annual CO_2 emissions in 2020–2030. Similarly, in the context of the carbon budget consistent with a likely chance of keeping warming below 2 °C, cumulative CO_2 emissions in 2020–2030 based on the latest NDCs would likely use up 39 per cent of the remaining carbon budget.

J. Adaptation

153. Adaptation involves responding to climate change by assessing impacts, vulnerability and risk; planning and implementing adaptation; making contingency arrangements for when impacts occur; addressing losses; and monitoring and evaluating adaptation efforts.

Arrangements have been developed under the Convention to facilitate adaptation, in particular NAPs, institutions such as the Adaptation Committee and the Least Developed Countries Expert Group, partnership structures for closing knowledge gaps, and provisions to facilitate support for, and transparency of, adaptation. Under the Paris Agreement, Parties may include an adaptation component in their NDCs.

1. Scope

154. Most Parties included an adaptation component in their NDCs, a few of which were designated as adaptation communications. In particular, they provided information on vulnerability and national circumstances; efforts to enhance adaptation-related research; adaptation measures, in particular NAPs and sectoral actions; contingency measures; synergies between adaptation and mitigation as well as with other global frameworks; and monitoring and evaluation of adaptation.

155. The information provided illustrates how Parties have advanced adaptation since the INDCs. For example:

(a) An increasing number of Parties provided information on adaptation, indicating the importance attached to adaptation by Parties from all regions and groups;

(b) Many Parties described the status of their process to formulate and implement NAPs, demonstrating how the NAP has been established as the main national instrument for adaptation and a key source of information for the NDCs.

156. Compared with their previous NDCs, Parties that communicated new or updated NDCs provided more detailed information on, in particular:

(a) Their national frameworks, thereby describing more integrated frameworks, in contrast to the multiple frameworks and individual projects described previously;

(b) Quantitative time-bound targets,[55] in contrast to the qualitative and open-ended adaptation objectives provided previously, with a few highlighting the indicator frameworks that they intend to use for monitoring progress;

(c) Mitigation and sustainable development co-benefits of adaptation, as well as on other synergies between mitigation and adaptation.

157. Some Parties identified the adaptation component as their adaptation communication, a few provided information organized around the elements identified in the annex to decision 9/CMA.1 and a few announced their intention to prepare an adaptation communication.

2. Impacts, risk and vulnerability

158. Almost all of the adaptation components described key climatic changes, referring in particular to temperature increase, extreme temperatures, precipitation changes and sea level rise. These were identified as triggering various climate impacts, in particular extreme events (including rainfall events, storms and cyclones), flooding, drought, heatwaves, saltwater intrusion, ocean acidification, coral bleaching, erosion, landslides, fires and thawing ice and permafrost. Parties described how impacts affect vulnerable areas. Of particular concern are agriculture and other aspects of food security, water, biodiversity and ecosystems, health systems, infrastructure (in particular energy, transportation and tourism) and loss of territory, livelihoods and habitats. Parties highlighted groups and areas that are particularly vulnerable. As factors of vulnerability, they highlighted, for example, dependence on climate-sensitive sectors, status as a small island developing State, having complex and vulnerable ecosystems, location of population and infrastructure on coasts, and economic factors, in particular poverty and lack of other institutional, financial and technical capacities. Vulnerability has also increased as a result of COVID-19.

3. Enhancing adaptation-related research for policymaking

159. Most of the Parties that included an adaptation component considered how to enhance adaptation-relevant research, data, information and monitoring, and ensure that adaptation

[55] See document FCCC/PA/CMA/2021/8/Add.1 for more details on quantitative targets.

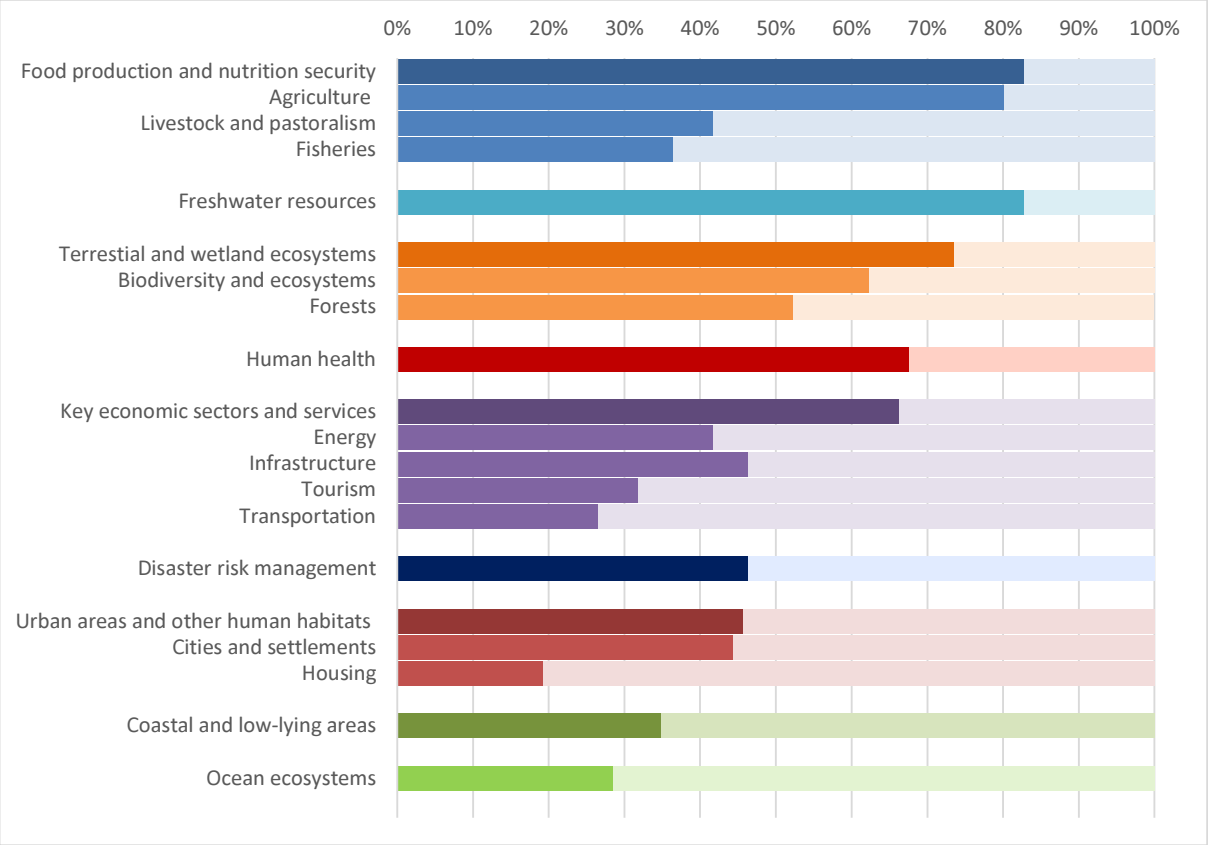
efforts are informed by science. Some of the adaptation components described efforts to enhance research through, for example, data collection programmes, national census on impacts, monitoring systems, observation networks, research centres, strengthened weather services, climate and risk modelling, risk maps with climate data and scenarios, and international cooperation. Research efforts focus in particular on oceans, coastal areas, land use and ecosystems. Research related to specific impacts includes development of flood or multi-hazard monitoring systems, sea level research programmes and remote sensing monitoring of hydrometeorological extremes. To ensure that adaptation is guided by robust science and projections, Parties are aiming to develop, for example, integrated climate information systems, open-source data, data pooling and sharing platforms for accessing information, and forecasting tools and scenarios.

4. Pre-emptive adaptation

160. Many Parties that provided an adaptation component described the process for formulating and implementing their NAP and its status. Some indicated that they have developed a NAP, while others identified their intention to do so, including a timeline for completion or update and/or implementation. Some Parties outlined links between their NAP and NDC, including how the NAP provided the basis for the adaptation component, how both build on the same vulnerability assessment, and how the NAP and NDC can be aligned. Some Parties described the scope of their NAP, including in relation to enabling risk and vulnerability analysis; integrating adaptation into development planning; enhancing climate information; strengthening adaptive, institutional, policy and technical capacities; outlining and prioritizing adaptation needs, objectives, milestones and actions as well as costs of adaptation; providing a framework for planning, implementation and coordination; integrating adaptation across frameworks and sectors; enhancing financing, engagement and gender-responsiveness; strengthening monitoring and evaluation (including by defining quantifiable goals and indicators for priority sectors); and enabling consideration of co-benefits between mitigation and adaptation.

161. Parties also described other policy frameworks relevant to adaptation, including information on how such frameworks provide a basis for adaptation efforts and how adaptation is integrated into and strengthened under other frameworks, such as adaptation-specific frameworks, national climate plans, local government or community-level plans, sectoral plans relevant to adaptation priorities, disaster risk reduction policies, national and regional development frameworks and UNFCCC frameworks (e.g. national adaptation programmes of action, technology needs assessments and the economic diversification initiative). A few Parties highlighted the inclusion of adaptation considerations in their national constitution.

Figure 10
Share of adaptation components of nationally determined contributions referring to specific adaptation priority areas and sectors



162. Parties provided a wide range of information on adaptation in various priority areas (see figure 10). The key efforts in those priority areas are described below.[56]

163. Climate impacts pose multiple risks to food security, including reduced production of major crops (wheat, rice and maize) and redistribution of marine fisheries.[57] In most adaptation components, measures for adapting food production systems and ensuring food security were prioritized, encompassing adaptation efforts in the areas of agriculture, livestock and fisheries. In agriculture, adaptation is being pursued via sectoral vulnerability analysis research, planning, diversification, financial mechanisms and insurance, systems for agroclimatic information and improvements to post-harvest processing. As technical solutions, Parties are focusing on, for example, temperature-, pest-, disease-, flood- and/or drought-resistant crops, seed banks, enhanced pest and disease control, enhanced irrigation and water use, and sustainable, climate-smart and integrated land-use and cultivation methods. Many adaptation components highlighted measures for enhancing resilience, sustainability and productivity of livestock and pastoralism, including research, disease control, rangeland management, more resilient breeds and feeds, insurance and diversification. The measures for enhancing sustainability of fisheries involve research, diversification, capacity-building, sustainable management, habitat protection and financial instruments (e.g. insurance).

[56] See document FCCC/PA/CMA/2021/8/Add.1 for information on specific measures and quantitative targets in each priority area.

[57] See pp.17–18 of IPCC. 2014. Summary for Policymakers. *In*: CB Field, VR Barros, DJ Dokken, et al. (eds.). *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge and New York: Cambridge University Press. Available at https://www.ipcc.ch/report/ar5/wg2/.

164. Climate change is expected to have negative impacts on human health up to 2050, including increased likelihood of undernutrition from diminished food production; injury, disease and death from more intense heatwaves and fires; and higher risks from food-, water- and vector-borne diseases.[58] Health was identified as an adaptation priority in many of the adaptation components, with relevant policy frameworks and plans described. The importance of building the capacity of health institutions and enhancing information and awareness was highlighted. Enhancing the climate resilience of public health systems was a recurring theme, with Parties aiming to build or improve related infrastructure. Parties are focusing on enhancing impact and disease surveillance and monitoring, providing training and education to healthcare professionals and communities, and performing vulnerability assessment and mapping. Measures tend to focus on improving sanitation and hygiene practices, as well as responding to climate-sensitive vector- or water-borne diseases, respiratory impacts and heatwaves.

165. According to current climate change projections, a large fraction of terrestrial species face an increased risk of extinction, with many regions projected to experience increased tree mortality and forest dieback owing to increased temperatures and drought.[59] Most adaptation components described adaptation efforts to protect terrestrial ecosystems and forests, with Parties aiming in particular to increase protected areas and connectivity, enhance urban biodiversity and forest areas, conserve vulnerable or threatened species, restore degraded lands and ecosystems and implement sustainable forest management and reforestation.

166. Global populations experiencing water scarcity and affected by major river floods are projected to increase, and climate change is expected to reduce raw water quality and pose risks to drinking water quality.[60] In most adaptation components, freshwater resources were identified as a priority area and measures for enhancing availability, efficiency and quality of water supplies were presented, including enhancing or building water infrastructure and water resource plans, strategies and systems. Parties are aiming to strengthen watershed management, efficiency of water use and irrigation. Integrated water resources management, protection and restoration of water-related ecosystems such as forests, wetlands and rivers, and supply diversification were highlighted measures. Efforts to promote transboundary water management and cooperation were also included.

167. Low-lying coastal areas are increasingly exposed to the risks associated with sea level rise as a result of increasing warming, which include saltwater intrusion, flooding, and infrastructure damage.[61] Many adaptation components included measures for protecting coastal and low-lying areas, including river deltas, and addressing sea level rise, erosion and saltwater intrusion. A few identified preventing loss of land as a main adaptation objective, with efforts including assessing and monitoring impacts on and vulnerability of coasts and national plans for coastal protection and management, implementing nature-based solutions for coastal restoration and protection and defining standards, regulations and guidelines for construction and flood protection. Parties also described efforts to adopt integrated coastal zone management approaches.

168. Coastal ecosystems are being affected by ocean warming, sea level rise, oxygen loss, acidification, intensified marine heatwaves, and salinity intrusion. Sea level rise is impacting coastal ecosystems through habitat contraction, geographical species shift, and loss of ecosystem functionality and biodiversity.[62] Some adaptation components outlined efforts to adapt ocean ecosystems to promote sustainable development while safeguarding oceans. Measures are focused on investing in ocean and the 'blue' economy and protecting marine and coastal ecosystems, with a focus on coral reefs, and seagrass and mangrove restoration and conservation. To support these measures, Parties identified steps to establish or strengthen related monitoring, surveillance and assessment systems and programmes.

[58] As footnote 57 above, pp.19–20.
[59] As footnote 57 above, pp.14–15.
[60] As footnote 57 above, p.14.
[61] See p.8 of the SR1.5.
[62] See p.13 of IPCC. 2019. Summary for Policymakers. *In*: H-O Pörtner, DC Roberts, V Masson-Delmotte, et al. (eds.). *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate*. Available at https://www.ipcc.ch/srocc/chapter/summary-for-policymakers/.

169. Climate change is expected to impact key economic sectors. For instance, patterns of energy demand will change in particular in terms of heating and cooling needs, and supply will be affected depending on sources, technologies and regions.[63] Many adaptation components described efforts to adapt key economic sectors and services, in particular energy, infrastructure, transportation and tourism. Efforts in the energy sector include impact analysis and planning, protection of hydropower resources and installations, diversification (e.g. by expanding clean energy), energy efficiency, energy conservation (through standards, labels and awareness) and storage. A few Parties outlined adaptation plans for the mining sector, which include tools for ensuring operability of hydrocarbon facilities. Parties are aiming to ensure resilience of infrastructure through, for example, risk assessments for critical infrastructure, building codes and resilience standards, associated education, elevation and nature-based solutions. Transportation was a focus area in some adaptation components, with adaptation measures including enhancing risk evaluation, such as by using geographic information systems, and developing green road infrastructure. Tourism is to be addressed through, for example, mainstreaming climate risk in sectoral policies; financial instruments and insurance; diversification towards, for example, green tourism; and protecting key locations (e.g. winter resorts, coasts and heritage sites). In some adaptation components, the industrial sector was considered in adaptation planning.

170. Climate change is projected to slow down economic growth and make poverty reduction more difficult.[64] Some adaptation components identified livelihoods as an adaptation priority area. Innovative livelihood strategies, social safeguards for vulnerable, financial assistance economic diversification were identified as being helpful in responding to loss of livelihoods.

171. Many key climate risks will impact urban areas,[65] and major impacts are projected in rural areas on water supply, food security and agricultural income.[66] Human habitats and settlements, including urban areas, were identified as priority areas in many adaptation components. Efforts in this area are aimed at adapting and enhancing the resilience of both rural and urban settlements, responding to human mobility needs and addressing forced displacement. Measures include conducting research to understand the links between climate and migration; improving housing and other infrastructure; establishing temporary resettlement and shelter programmes to support displaced people; creating migration opportunities and arrangements for relocation, while ensuring the right to remain. Some efforts are focused on adaptation of cities and urban areas, including through planning, vulnerability and risk assessment, upgrading informal settlements and creating urban greening and nature-based solutions.

172. Many adaptation components described measures for enhancing disaster risk management and early warning systems. Policy and institutional measures include enhancing risk assessment and monitoring, integrating disaster risk management into adaptation efforts, and establishing early warning systems, including a national multi-hazard early warning system, community-based systems, or systems specific to particular areas or sectors (e.g. coasts and rivers, forestry and ecosystems, water, agriculture, transportation, infrastructure, health and tourism) or hazards (e.g. for sea level rise, extreme events, disease outbreaks, drought and floods).

5. Contingency measures

173. Contingency measures for dealing with emergencies and impacts that occur regardless of adaptation efforts were highlighted in some adaptation components, such as strengthening resilience to impacts beyond the limits of adaptation through NAPs; search and rescue, contingency or emergency plans and systems; emergency shelters; humanitarian assistance civil defence; evacuation procedures; emergency or contingency funding; food reserves;

[63] As footnote 57 above, p.19.

[64] As footnote 57 above, p.20.

[65] See p.538 of IPCC. 2014. *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. CB Field, VR Barros, DJ Dokken, et al. (eds.). Cambridge and New York: Cambridge University Press. Available at http://www.ipcc.ch/report/ar5/wg2.

[66] As footnote 65 above, p.616.

disaster insurance schemes; livelihood protection policies; and support for displaced persons. For the agriculture and livestock sectors, Parties referred to insurance and risk management mechanisms, as well as post-disaster relief. In the fisheries sector, measures include using financial instruments such as insurance against extreme events and establishing a minimum income for fishers. Measures were also suggested for health, infrastructure, coasts and tourism.

6. Monitoring and evaluation, and understanding progress

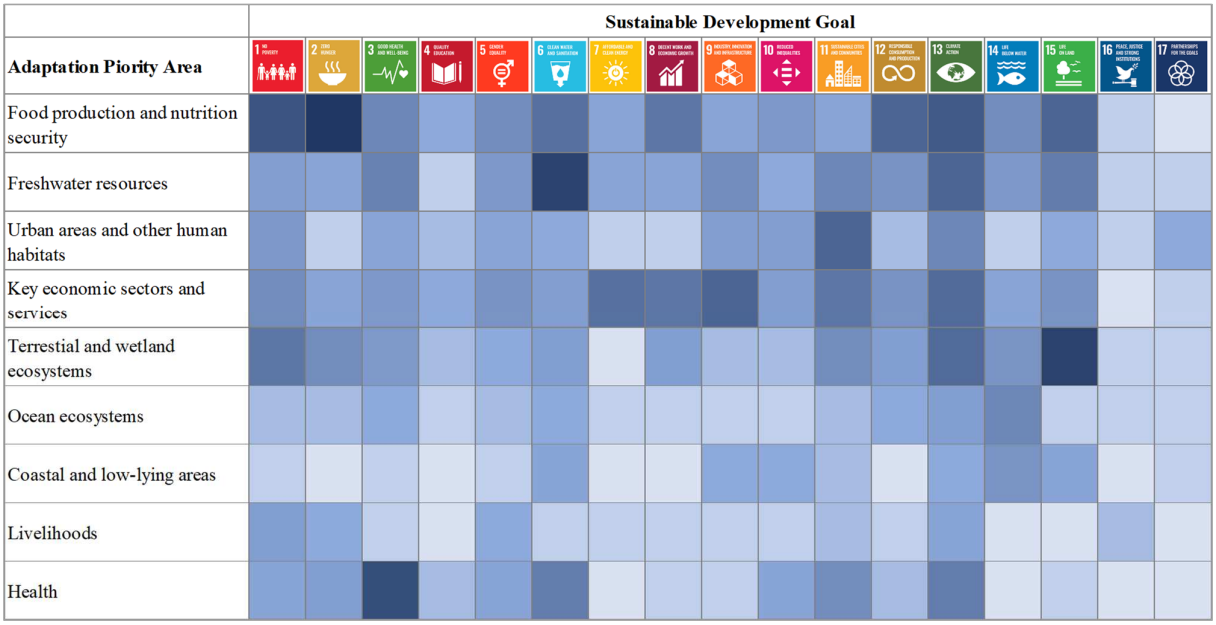
174. Many Parties described in their adaptation components their efforts to enhance monitoring and evaluation of adaptation, such as by focusing on tracking progress, reducing vulnerability, improving efficiency and effectiveness of actions, NAP implementation and support. Approaches included using systems for integrating climate and adaptation information, sectoral monitoring tools (e.g. in agriculture and tourism) and a platform for integrating tools for monitoring climate risk and low-emission development. Some of those Parties identified and described their intention to apply global, national or sectoral quantitative indicators for monitoring the development of specific climate parameters and impacts, and monitoring progress of specific measures and/or sectoral performance, including towards targets linked to a specific baseline. Quantified targets were identified in particular for the water, agriculture, forestry, sanitation, livestock, health, energy, transportation, hygiene, infrastructure and biodiversity sectors. See document FCCC/PA/CMA/2021/8/Add.2 for an overview of more specific targets defined for key adaptation areas.

7. Synergies with mitigation and sustainable development

175. Some Parties elaborated on synergies between adaptation and mitigation (mitigation co-benefits of adaptation action are covered in chap. IV.G above). A few Parties identified how their mitigation action can generate adaptation co-benefits. For example, in the energy sector, using renewable energy can also enhance energy security and access to water and reduce pollution. Other mitigation measures, such as fuel switching, increasing efficiency, and forest preservation, afforestation and reforestation, were described as having adaptation co-benefits (e.g. mangrove forests protect coastlines). The health co-benefits of emission reductions were also highlighted.

176. Some Parties described how their adaptation actions relate to sustainable development frameworks, describing the overall linkages and synergies between their adaptation efforts and efforts towards the SDGs; identifying the essential role of adaptation in the achievement of SDGs, as well as the role of sustainable development in successful adaptation; and emphasizing the importance and benefits of integrating implementation of climate and SDG-related efforts. Further, some Parties specified how adaptation in specific priority areas contributes to achieving individual SDGs. Figure 11 provides an overview of the specific synergies identified between adaptation efforts and efforts towards SDGs.

Figure 11
Synergies between efforts in adaptation priority areas and efforts towards Sustainable Development Goals identified in nationally determined contributions



Note: The shading reflects how frequently linkages were identified by Parties: the darker the shading, the more frequently linkages were identified.

K. Domestic mitigation measures

177. Under Article 4, paragraph 2, of the Paris Agreement, Parties shall pursue domestic mitigation measures with the aim of achieving the objectives of their NDCs.

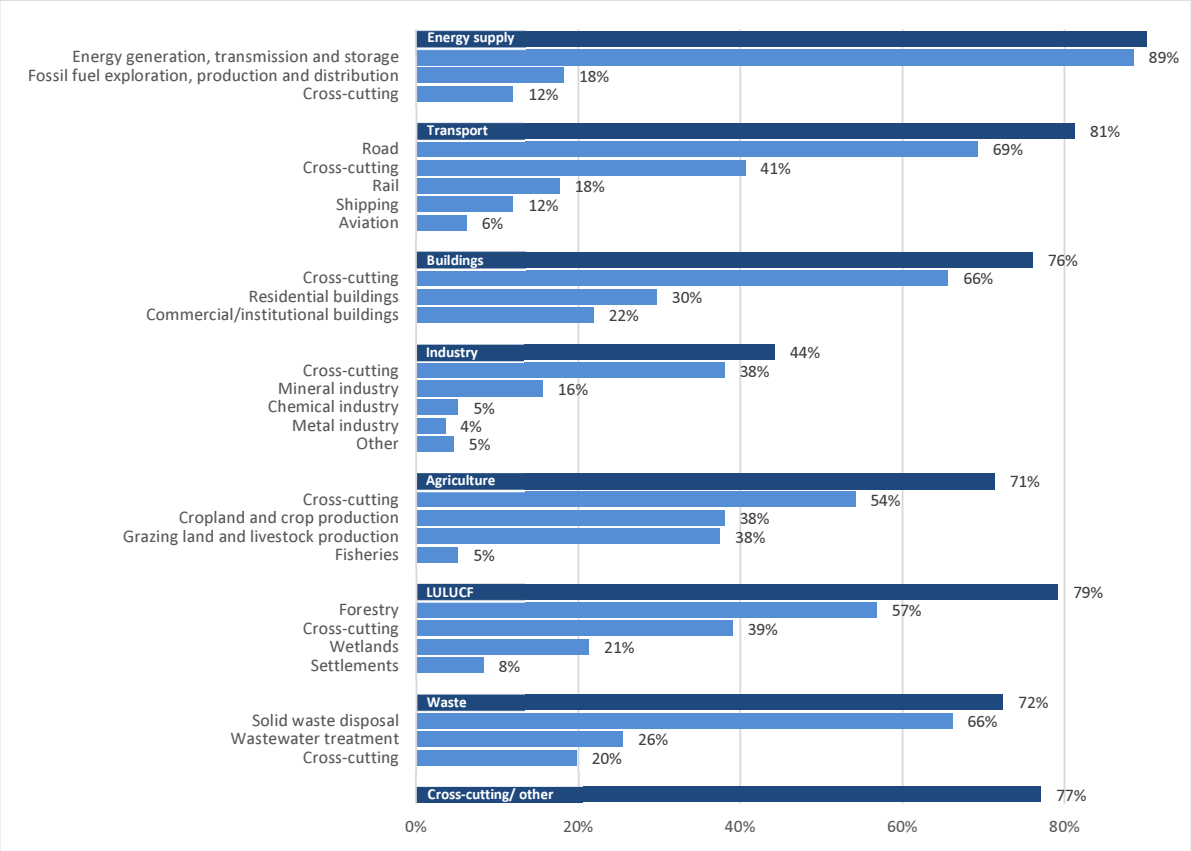
178. Almost all Parties outlined such measures in their NDCs as key instruments for achieving mitigation targets of their NDCs and/or specific priority areas of national importance, which are often a subset of one or more IPCC sectors, including energy supply, transport, buildings, industry,[67] agriculture, LULUCF and waste. Most Parties communicated measures in the priority areas of energy supply, transport, LULUCF, buildings, agriculture and waste, while much fewer indicated measures in industry (see figure 12).

179. Many Parties communicated one or more quantitative mitigation targets specific to priority areas or sub-areas, which support and underpin their overall mitigation targets. Such quantitative mitigation targets were provided most frequently for energy supply by many Parties, followed by LULUCF and cross-cutting or other.

[67] Covers measures targeting emissions from fuel use in industry, industrial process emissions and emissions from product use. For the scopes of the other priority areas, including cross-cutting or other, see document FCCC/PA/CMA/2021/8/Add.2.

Figure 12

Share of Parties referring to specific priority areas and sub-areas for domestic mitigation measures in nationally determined contributions



Note: If a Party communicated more than one measure for a specific priority area or sub-area, it was counted as one Party communicating measures for that area.

1. Sub-areas and mitigation options under priority areas

180. Of the sub-areas under priority areas communicated, energy generation, transmission and storage was most frequently identified by most Parties, followed by road transport; cross-cutting sub-area[68] under buildings; solid waste disposal; forestry; and cross-cutting sub-area under agriculture(see figure 12), which together cover the most frequently indicated mitigation options[69] (see figure 13).

181. Renewable energy generation was the most frequently indicated mitigation option, followed by improving energy efficiency of buildings; afforestation, reforestation and revegetation; multisector energy efficiency improvement; cross-cutting mitigation option under agriculture; and improving energy efficiency of transport (see figure 13). Some Parties communicated quantitative targets for renewable energy share (ranging from 15 to 100 per

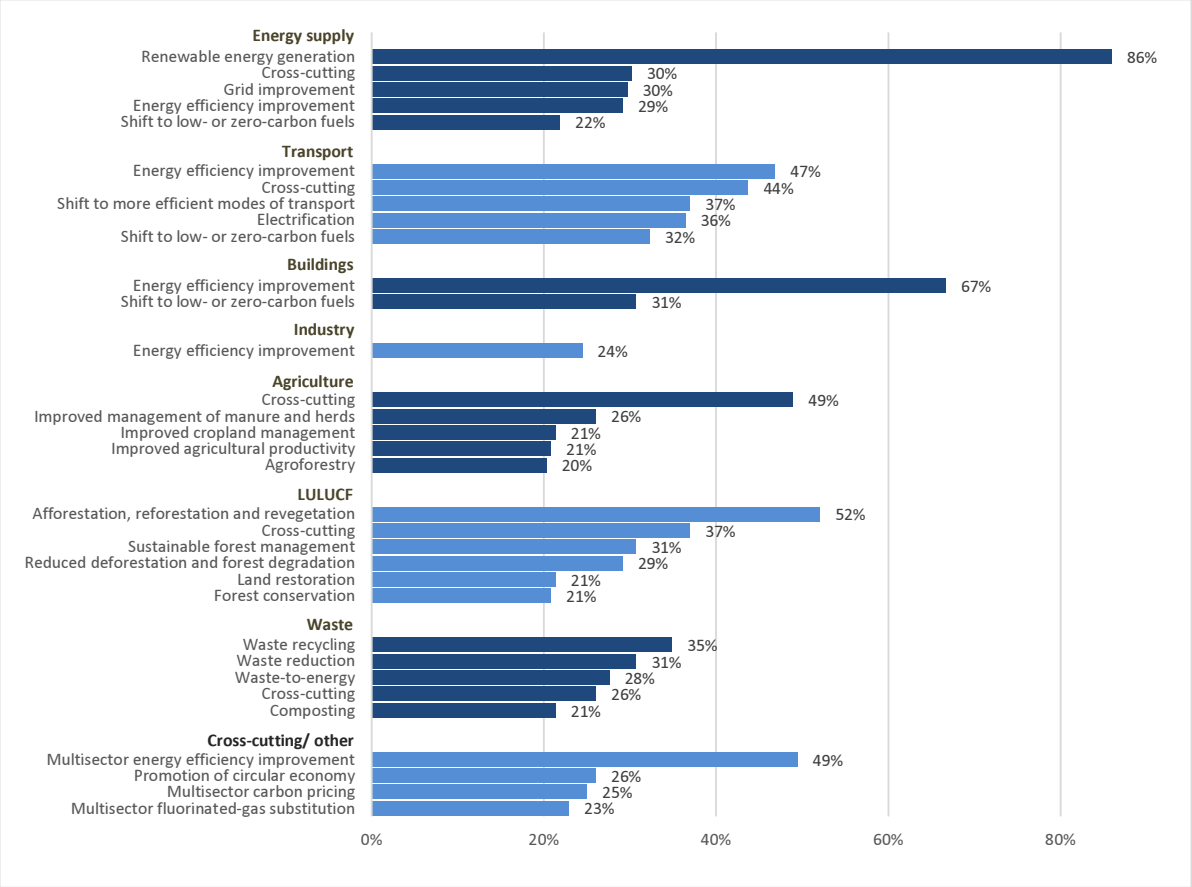
[68] Covers measures applicable to more than one sub-area under a priority area. For example, the cross-cutting sub-area under buildings covers measures applicable to both residential buildings and commercial or institutional buildings, and the cross-cutting sub-area of energy supply covers measures applicable to both energy generation, transmission and storage, and fossil fuel exploration, production, transport and distribution.

[69] Refers in this report to expected key mitigation effects or categories of domestic mitigation measures, which were identified by analysing the trend in the measures set out in the new or updated NDCs and by referring to those identified in the previous NDC synthesis report and relevant IPCC reports, including the SR1.5.

cent) in electricity generation by 2030; and many of those target shares fall within or above the IPCC range of 47–65 per cent consistent with 1.5 ºC pathways.[70]

182. For the Parties that communicated new or updated NDCs, renewable energy generation continued, as in their previous NDCs, to be the most frequently indicated mitigation option and focus of quantitative mitigation targets, with the share of Parties indicating this option and target sharply increasing from 55 to 87 per cent and from 34 to 59 per cent, respectively, since their previous NDCs.

Figure 13
Share of Parties referring to the frequently indicated mitigation options in nationally determined contributions



Note: If a Party communicated more than one measure for one of the frequently indicated mitigation options, it was counted as one Party communicating measures for that option.

183. In the priority areas related to supply and end-use of energy such as energy supply, transport, buildings and industry, renewable energy generation and shifting to low- or zero-carbon fuels were frequently or widely indicated as key mitigation options relevant to reducing the carbon intensity of electricity and other fuels (see figure 13); electrification was mentioned in relation to increasing the share of final energy supplied by electricity and switching fuel use from fossil fuels to electricity in end-use sectors such as transport and buildings, benefiting from electricity with reduced carbon intensity; and improving energy efficiency and shifting to more efficient modes of transport were often referenced in relation to reducing energy demand.

184. More broadly across all priority areas, Parties frequently indicated waste reduction, waste-to-energy, improved management of manure and herds, and fluorinated gas substitution as key mitigation options relevant to reducing non-CO_2 emissions (see figure 13). In addition, Parties often communicated mitigation options related to circular economy,

[70] The interquartile range of global renewable energy share in electricity generation by 2030 consistent with the emission pathways to 1.5 °C with no or limited overshoot in the SR1.5.

including reducing and recycling waste and promoting circular economy. Measures related to multisector carbon pricing were frequently identified as efficiently incentivizing low-carbon behaviours and technologies by putting a price on GHG emissions.

185. Most Parties included mitigation measures in the area of LULUCF in their NDCs. In terms of key mitigation options relevant to enhancing carbon sequestration in soil or vegetation, afforestation, reforestation, revegetation, sustainable forest management and reduced deforestation and forest degradation were most frequently indicated (see figure 13). In this context, many developing country Parties referred to reducing deforestation as a priority with high mitigation potential, including through efforts to implement REDD+ activities. Many Parties highlighted the importance of socioeconomic and environmental non-carbon benefits resulting from these mitigation activities, including for adaptation.

186. The SR1.5 identifies mitigation options considered relevant to aligning with 1.5 °C pathways, including:

(a) Halting investment in unabated coal by 2030. A few Parties communicated corresponding measures, such as phasing out use of unabated coal to produce electricity by 2025;

(b) Phasing out of sales of fossil-fuel passenger vehicles by 2035–2050. A few Parties communicated corresponding measures, including banning new registration of diesel and gasoline vehicles after 2030;

(c) Requiring newly constructed buildings to be near zero energy by 2020. Some Parties communicated corresponding measures, such as requiring new buildings constructed after 1 January 2020 to consume almost zero energy;

(d) Expanding forest cover by 2030. Some Parties communicated quantitative targets for increasing national forest cover, such as increasing forest cover to 60 per cent of the national territory without competing for land with the agriculture sector;

(e) Reducing food waste and loss.[71] A few Parties communicated measures for reducing food waste as part of waste reduction, such as taking action through voluntary agreements with the food industry and expanding food waste collection to achieve zero food waste to landfill by 2030.

2. Coherence and synergies with development priorities

187. Many Parties highlighted policy coherence and synergies between their mitigation measures and development priorities. The share of Parties highlighting policy coherence and synergies has increased from 50 to 69 per cent in the new or updated NDCs compared with their previous NDCs.

188. Some identified domestic mitigation measures in the context of the longer-term measures and policies set out in their LT-LEDS and/or other relevant national long-term low-emission development strategies or laws; for example, by identifying domestic mitigation measures for the NDC on the basis of programmes of actions or mitigation options set out in the national LT-LEDS, by formalizing net zero emission targets by 2050 and by requiring governments to report on the implementation of measures in their NDCs at least once every five years to ensure oversight of progress towards the 2050 targets.

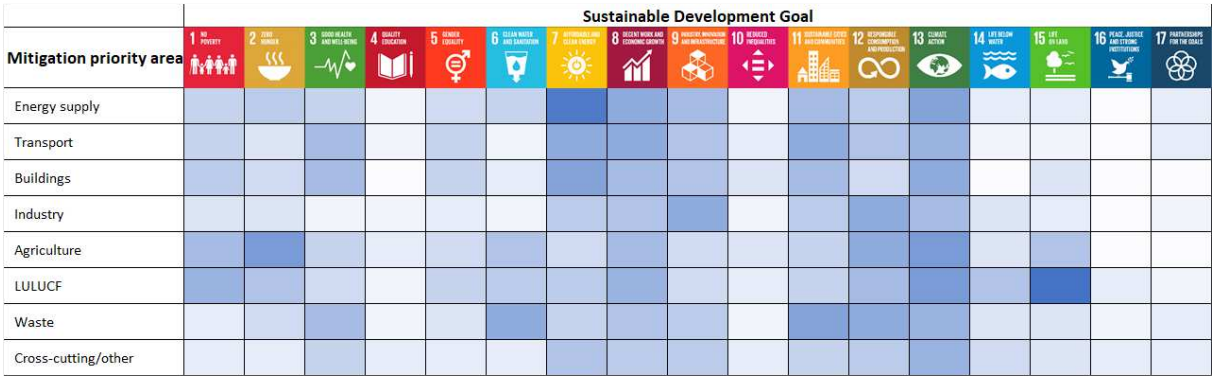
189. In addition, some Parties clarified the alignment between their mitigation measures and efforts towards specific SDGs, highlighting the multiple co-benefits of their measures for sustainable development and the cost-effectiveness of their measures in relation to sustainable development under their fiscal constraints, including those due to the COVID-19 pandemic. For example, some Parties communicated one or several specific SDGs in relation to which there are synergies with their priority areas or mitigation measures (see figure 14),

[71] The SR1.5 refers to food waste as inappropriate human consumption of food that leads to food spoilage associated with inferior quality or overproduction, while it refers to food loss as the decrease in mass and nutritional value of food due to poor infrastructure, logistics and lack of storage technologies. The SR1.5 further states that decreasing food waste and loss contributes to land transition in line with 1.5 °C pathways by limiting various demands for land, including for production of food and livestock feed, that may compete with demand for land for afforestation.

with energy supply measures contributing to achieving SDG 7 (affordable and clean energy) and LULUCF measures contributing to achieving SDG 15 (life on land) most frequently indicated; and a few considered contribution to achieving SDGs as a criterion for identifying such measures to be included in their NDCs.

Figure 14

Synergies between efforts in mitigation priority areas and efforts towards Sustainable Development Goals identified in nationally determined contributions



Note: The shading reflects how frequently linkages were identified by Parties: the darker the shading, the more frequently linkages were identified.

190. Further, some of the Parties that communicated new or updated NDCs highlighted synergies between their mitigation measures and green recovery from the impacts of the COVID-19 pandemic, such as implementing a "Green New Deal" for accelerating implementation of the measures identified in the updated NDC.

L. Means of implementation

191. Almost all Parties provided information on some or all means of implementation in their NDCs, although the structure and depth of that information varied significantly. While some Parties included a dedicated section on means of implementation or separate sections on finance, technology and/or capacity-building, many mentioned or referred to aspects of means of implementation in other sections of their NDCs.

192. Some Parties provided information on specific climate finance, technology and capacity-building projects, including, for some, detailed information on financial and technical requirements, implementing entities and time frames.

193. Some Parties highlighted South–South, triangular or regional cooperation as support mechanisms for NDC implementation, including for specific aspects of financial assistance, capacity-building and technology development and transfer.

1. Finance

194. Almost all Parties provided information on finance as a means of NDC implementation, with most characterizing finance in terms of international support needed and some mentioning finance in relation to domestic implementation only. A few mentioned finance in the context of providing financial support for other countries' NDC implementation. Many Parties provided qualitative information on how finance will be used as a means of implementation either in general or through specific actions for financing mitigation or adaptation support, such as earmarking public expenditure, establishing climate funds or supporting financial systems. Many also included quantitative information on financial investment or expenditure to support their NDCs, such as on financing specific technology development funds, economy-wide budgetary programmes or specific projects and needs for financial support.

195. Many Parties provided quantitative estimates of financial support needs, which were often expressed as total amounts over the time frame of the NDC. Many of them provided updated quantitative estimates of financial support needs and some others provided estimates

for the first time in their new or updated NDCs. Most of those Parties also made efforts to differentiate quantitative estimates for conditional actions reliant on international support from those for unconditional actions that may be financed from domestic sources.

196. Some Parties provided information on financial support needs across mitigation and adaptation themes or sectors, and a few provided total estimates. Mitigation finance is needed across renewable energy, energy efficiency, transport and forestry, while adaptation finance is needed for activities related to water, agriculture, coastal protection and resilience.

2. Technology development and transfer

197. With regard to information on technology development and transfer for NDC implementation, most Parties covered qualitative aspects and many also quantitative aspects.

198. Many Parties referred to technology development and transfer in the context of actions that inherently address both adaptation and mitigation or focus on mitigation. Many Parties also made reference to climate technology for adaptation.

199. Information provided by Parties on climate technology related matters was mainly on specific technologies to be deployed; technology needs; policy, regulatory and legal aspects; technology innovation, research and development; and support required by Parties or support provided by Parties for technology development and transfer.

200. In terms of specific technologies that Parties intend to use for achieving their adaptation and mitigation targets, the most frequently identified were cross-sectoral energy-efficient appliances and processes, enhanced utilization of renewable energy technologies such as hydropower, solar, wind and biomass, low- or zero-emission vehicles, blended fuel, waste to energy technologies and climate-smart agriculture.

201. Technology needs mentioned by Parties were mainly in the areas of energy, agriculture, water, waste, transport, climate observation and early warning. As regards technology innovation, research and development, some Parties included information on promoting collaboration between countries and promoting institutions, mechanisms, tools and business models that foster progress in this area. Actions on policy, regulatory and legal aspects commonly referred to by Parties include developing or updating policies and strategies to promote technology innovation, promoting use of renewable energy and accelerating adoption and transfer of climate technologies. A few Parties included specific information on their intended provision of support to developing country Parties, while some Parties indicated the support needed for development and deployment of clean technologies, for example in the areas of energy, energy efficiency and agriculture. Some Parties referenced technology needs assessments and technology action plans in identifying priority technology needs in adaptation and mitigation.

3. Capacity-building

202. Many Parties identified capacity-building as a prerequisite for NDC implementation. Many Parties provided a specific section containing information on capacity-building needs. Capacity-building needs were identified for formulating policies, integrating mitigation and adaptation into sectoral planning processes, accessing finance, and providing the necessary information for clarity, transparency and understanding of NDCs. Capacity-building needs were assessed in three ways: by thematic area, by sector and by category.

203. With regard to thematic areas, many Parties provided information on cross-cutting capacity-building needs, whereas many others expressed capacity-building needs for adaptation and some others for mitigation. Also, a few Parties indicated capacity-building needs for addressing loss and damage and many Parties identified their efforts or needs in relation to sectoral capacity-building. Many Parties identified capacity-building needs that were multisectoral, followed by some others that identified needs relating to the subsector other,[72] buildings and infrastructure, energy and/or health.

[72] Covers capacity-building needs and gaps applicable to sectors that do not fall within the sectors identified for the data analysis, such as sustainable tourism, empowerment of women, youth engagement, coastal areas, waste management, GHGs and land.

204. With regard to capacity-building categories, many Parties referred to cross-cutting capacity-building needs, mainly for facilitation of training, education, peer-to-peer learning and awareness-raising. Some Parties emphasized the importance of capacity-building to support institutional strengthening in order to ensure the sustainability and retention of capacities at the national level.

205. The share of Parties that referred to capacity-building in specific sections of their new or updated NDCs increased significantly compared with their previous NDCs, with the number of Parties indicating that capacity-building needs were mostly of a multisectoral nature having risen significantly. The number of Parties expressing capacity-building needs for adaptation also increased, this being the thematic area in which most capacity-building needs were expressed. Parties continued to emphasize the importance of capacity-building to support institutional strengthening in their new and updated NDCs.

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CONFERENCE OF THE PARTIES TO THE
CONVENTION ON BIOLOGICAL DIVERSITY
Ninth meeting
Bonn, 19–30 May 2008
Agenda item 4.5

DECISION ADOPTED BY THE CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY AT ITS NINTH MEETING

IX/16. Biodiversity and climate change

A. Proposals for the integration of climate-change activities within the programmes of work of the Convention

The Conference of the Parties

1. *Decides* that, in conducting future in-depth reviews of the programmes of work of the Convention, climate change considerations should be integrated into each programme of work where relevant and appropriate, taking into account, *inter alia*, the Third and Fourth Assessment Reports of the Intergovernmental Panel on Climate Change, Technical Series No. 10 and No. 25 of the Convention on Biological Diversity and the global Assessment on Peatlands, Biodiversity and Climate Change, considering the following:

(a) The assessment of potential impacts of climate change * and both the positive and negative impacts of climate change mitigation and adaptation activities on relevant ecosystems;

(b) The most vulnerable components of biodiversity;

(c) The risks and consequences for ecosystem services and human well-being;

(d) The threats and likely impacts of climate change * and both the positive and negative impacts of climate change mitigation and adaptation activities on biodiversity and the opportunities they provide for the conservation and sustainable use of biodiversity;

(e) Monitoring of the threats and likely impacts of climate change, * and both the positive and negative impacts of climate change mitigation and adaptation activities on biodiversity;

(f) Appropriate monitoring and evaluation techniques, related technology transfer and capacity-building support within the programmes of work;

* Including increasing climate variability and increasing frequency and intensity of extreme weather events.

(g) Critical knowledge needed to support implementation, including *inter alia*, scientific research, availability of data, appropriate measurement and monitoring techniques technology and traditional knowledge;

(h) The ecosystem-approach principles and guidance and the precautionary approach;

(i) The contribution of biodiversity to climate-change adaptation, and measures that enhance the adaptive potential of components of biodiversity;

2. *Requests* the Executive Secretary when preparing for the in-depth review of the programmes of work of the Convention to take into account an analysis to identify the elements of the guidance (paragraph 1 above) already included in the existing programmes of work and an assessment of the state of implementation, as well as the identification of gaps in implementation including a review of barriers and suggestions to overcome them;

3. *Requests* the Executive Secretary, as far as possible in collaboration with the secretariats of the other two Rio conventions, to compile and synthesize information on interactions between acidification, climate change and multiple nutrient-loading as possible threats to biodiversity during the in-depth reviews of the programmes of work on inland water and marine and coastal biodiversity;

4. *Urges* Parties to enhance the integration of climate-change considerations related to biodiversity in their implementation of the Convention with the full and effective involvement of relevant stakeholders and considering changing consumption and production models, including:

(a) Identifying, within their own countries, vulnerable regions, subregions and, where possible, ecosystem types, including vulnerable components of biodiversity within these areas, including with regard to the impacts on indigenous and local communities, in order to enhance national, regional and international cooperation;

(b) Integrating concerns relating to the impacts of climate change * and both the positive and negative impacts of climate change mitigation and adaptation activities on biodiversity within national biodiversity strategy and action plans;

(c) Assessing the threats and likely impacts of climate change * and both the positive and negative impacts of climate change mitigation and adaptation activities on biodiversity;

(d) Identifying and adopting, within their own countries, monitoring and modelling programmes for regions, subregions and ecosystems affected by climate change and promote international cooperation in this area;

(e) Enhancing scientific tools, methodologies, knowledge and approaches to respond to the impacts of climate change, * and both the positive and negative impacts of climate change mitigation and adaptation activities on biodiversity, including socio-economic and cultural impacts;

(f) Enhancing the methodology and the knowledge needed to integrate biodiversity considerations within climate change response activities, such as baseline information, scenarios, potential impacts on and risks to biodiversity, and resilience and resistance of ecosystems and selected species populations and communities/assemblages and encouraging the exchange of such knowledge at the national, regional and international level;

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* Including increasing climate variability and increasing frequency and intensity of extreme weather events.

(g) Increasing stakeholder involvement in the decision-making process relating to the impacts of climate change, * and both the positive and negative impacts of climate-change mitigation and adaptation activities on biodiversity, as appropriate;

(h) Applying the principles and guidance of the ecosystem approach such as adaptive management, the use of traditional knowledge, and the use of science and monitoring;

(i) Taking appropriate actions to address and monitor the impacts of climate change of climate-change and both the positive and negative impacts of climate change mitigation and adaptation activities on biodiversity;

(j) Enhancing cooperation with relevant organizations and among national focal points;

5. *Encourages* Parties, other Governments, donors and relevant organizations to provide financial and technical support to capacity-building activities, including through raising public awareness, so as to enable developing countries, especially least developed countries, small island developing States, and countries with economies in transition, to implement activities related to the impacts of climate change, * and of the positive and negative impacts of climate change mitigation and adaptation activities on biodiversity;

6. *Requests* the Executive Secretary, subject to the availability of financial resources, to convene a workshop for small island developing States to integrate considerations on the impacts of climate change, * and both the positive and negative impacts of climate-change mitigation and adaptation activities within programmes of work and national biodiversity strategies and action plans, with a view to holding similar capacity-building workshops in other groups of countries;

B. Options for mutually supportive actions addressing climate change within the three Rio conventions

The Conference of the Parties,

Noting with appreciation the reports of the seventh and eighth meetings of the Joint Liaison Group and the document prepared jointly by the three Rio conventions (UNEP/CBD/WGRI/1/7/Add.1) containing proposals on mutually supportive activities for the secretariats of the Rio conventions;

Noting the information notes on forests and adaptation highlighting the links between biodiversity, desertification/land degradation and climate change drafted jointly by the secretariats of the three Rio conventions;

Further noting the Rio Principles on Environment and Development 1/ when developing synergies,

Further noting the results of the International Expert Meeting on Responses to Climate Change for Indigenous and Local Communities and the Impact on their Traditional Knowledge Related to Biological Diversity in the Arctic Region, held in Helsinki from 25 to 28 March 2008 (UNEP/CBD/COP/9/INF/43),

1/ *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex I.

Recognizing the specific needs and concerns of developing country Parties, in particular least developed countries and small island developing States, and Parties with economies in transition, when developing synergies,

Welcoming the High-Level Conference on World Food Security and the Challenges of Climate Change and Bioenergy of the Food and Agriculture Organization of the United Nations to be held from 3 to 5 June 2008, that will address issues related to climate change adaptation and mitigation,

1. *Recognizing* the distinct mandates and independent legal status of each convention and the need to avoid duplication and promote cost savings, *requests* the Executive Secretary to collaborate with the secretariats of the other Rio conventions in order to:

(a) Continue with the activities that are already ongoing or have been called for by Parties in the framework of the three Rio conventions, including those activities listed in annex I to the present decision;

(b) Implement the following, making full use of existing tools, such as the clearing-house mechanism:

(i) Publish an electronic bulletin on synergies between the three Rio conventions, including reports on progress from Parties;

(ii) Create tools to inform Parties about relevant activities on biodiversity conservation and sustainable use, on combating environmental degradation, desertification/land degradation and climate change, including through updating existing tools and publications such as the clearing-house mechanism under the Convention and national biodiversity information systems;

(iii) Produce educational materials bearing in mind cultural circumstances and delivery methods based on the needs of the target audiences; and

(iv) Develop Web-based communication tools;

(c) Identify further opportunities for mutually supportive activities and continue deliberating on streamlining reporting;

(d) Pursue opportunities to support activities linked to national capacity self-assessment projects towards implementation of the three Rio conventions;

2. *Requests* the Executive Secretary to continue discussions within the Joint Liaison Group on the following activities:

(a) Make available relevant notifications to other conventions' focal points through the Web;

(b) Compile, where available, lessons learned and case-studies on national mechanisms for coordination among focal points in order to enhance cooperation;

(c) Share reports and reviews of national planning processes, where available, and highlight lessons learned that may be relevant across conventions in order to improve integrated planning;

(d) Provide case-studies and lessons learned on the integration of biodiversity and desertification / land degradation issues within national adaptation plans of action under the United Nations Framework Convention on Climate Change (UNFCCC);

(e) Improve ways to communicate to the scientific community the three Rio conventions' research needs on synergies; and

(f) Provide the focal points of all three conventions with up-to-date information on relevant assessments, research programmes and monitoring tools;

3. *Requests* the Executive Secretary to compile case-studies, good-practice examples and lessons learned on activities, tools and methods to promote synergies between activities addressing biodiversity, desertification/land degradation and climate change at the national and, where appropriate, the local level, and report thereon and, through the Subsidiary Body on Scientific, Technical and Technological Advice, on progress in the implementation of mutually supportive activities, during the in-depth review of the ongoing work under the cross-cutting issue of biodiversity and climate change at the tenth meeting of the Conference of the Parties;

4. *Requests* the Executive Secretary to explore, *inter alia*, with the Global Environment Facility, ways and means to achieve biodiversity co-benefits and benefits for combating desertification/land degradation in climate-change activities, including through capacity-building, with a view to presenting a specific proposal to the Conference of the Parties at its tenth meeting;

5. *Requests* the Executive Secretary, recalling the Memorandum of Cooperation with the Secretariat of the International Plant Protection Convention, to enhance cooperation with regard to changing risk for biodiversity resulting from climate-change impacts on plant pests, in order to gather relevant scientific information so as to inform policy;

6. *Requests* the Executive Secretary to explore with the United Nations Environment Programme, and as far as possible in collaboration with the Joint Liaison Group, the nature and scope of the Bali Strategic Plan for Technology Support and Capacity-Building with a view to identifying how it might support the achievement of synergies between the three Rio conventions in national implementation, and report thereon to the Conference of the Parties at its tenth meeting;

7. *Invites* the secretariats of the three Rio conventions to build on and strengthen existing tools and synergies with members of the Collaborative Partnership on Forests (CPF), including the CPF Web platform, for forest-related activities;

8. *Noting* that efforts at the national and local levels are of high importance to the achievement of synergies between activities addressing biodiversity, combating desertification/land degradation and climate change, *invites* Parties and other Governments, where appropriate based on national circumstances, to implement the activities contained in the indicative list in annex II to the present decision;

9. *Further invites* Parties and other Governments to support, as appropriate, the implementation of relevant components of existing national climate change adaptation plans in developing countries, particularly the least developed countries, small island developing States, and countries with economies in transition;

10. *Invites* relevant organizations to provide support to Parties, as appropriate and based on national circumstances, in implementing the activities laid out in annex II to the present decision in order to enhance cooperation and coordination between the three Rio conventions and other relevant multilateral environmental agreements;

11. *Notes* that reduced deforestation and forest degradation, and increased afforestation and reforestation, could provide multiple benefits for biodiversity and reducing greenhouse gas-emissions, and:

(a) *Welcomes* the consideration of the issue of reducing emissions from deforestation and forest degradation in the framework of the United Nations Framework Convention on Climate Change,

(b) *Invites* the United Nations Framework Convention on Climate Change to take full account of opportunities for its work to provide benefits for biodiversity, including through collaboration among the subsidiary bodies of the three Rio conventions and the application of the ecosystem approach and sustainable forest management, and

(c) *Invites* the United Nations Framework Convention on Climate Change to adequately address traditional knowledge, innovations and practices related to the conservation and sustainable use of biodiversity noting relevant provisions of the Convention on Biological Diversity;

12. *Recalling* paragraph 11 of decision 1/CP.13, on the Bali Action Plan, in which Parties to the United Nations Framework Convention on Climate Change agreed that the comprehensive process to enable the full, effective and sustained implementation of the Framework Convention through long-term cooperative action shall be informed by, *inter alia*, the best available scientific information, experience in implementation of the Framework Convention and its Kyoto Protocol, and processes thereunder, outputs from other relevant intergovernmental processes and insights from the business and research communities and civil society:

(a) *Recognizes* the need to provide biodiversity relevant information to the processes under the United Nations Framework Convention on Climate Change in a timely manner;

(b) *Establishes* in this regard, an Ad Hoc Technical Expert Group on Biodiversity and Climate Change, including representatives of indigenous and local communities and small island developing States, on the basis of the terms of reference provided in the annex III to the present decision, with a mandate, to develop scientific and technical advice on biodiversity, in so far as it relates to climate change and decision 1/CP.13 of the Conference of the Parties to the United Nations Framework Convention on Climate Change on the Bali Action Plan as well as its Nairobi work programme on impacts, vulnerability and adaptation to climate change so as to support the enhanced implementation of synergies;

(c) *Requests* the Executive Secretary to convey the deliberations of this Ad Hoc Technical Expert Group to the secretariat of the United Nations Framework Convention on Climate Change for appropriate consideration;

13. *Invites* Parties to submit views on ways to integrate biodiversity considerations in climate-change related activities;

14. *Requests* the Executive Secretary to prepare a compilation of the views submitted pursuant to paragraph 13 of the present decision for consideration by the Subsidiary Body on Scientific, Technical and Technological Advice, prior to the tenth meeting of the Conference of the Parties;

15. *Invites* Parties to support efforts by developing countries to monitor, at the national level, the impacts of climate change on biodiversity;

16. *Requests* the Executive Secretary to summarize information on the conservation and sustainable use of biodiversity relevant for Reducing Emissions from Deforestation and Forest Degradation in developing countries (REDD) found within existing documents, including the report of the Viterbo Workshop on "Forests and Forest Ecosystems: Promoting Synergy in the Implementation of the three Rio Conventions" (April 2004), the Millennium Ecosystem Assessment and CBD Technical Series Nos. 10 and 25 and provide this information to the Executive Secretary of the United Nations

Framework Convention on Climate Change with the intention that it be transmitted to the third session, and subsequent sessions, of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention of the United Nations Framework Convention on Climate Change;

17. *Invites* Parties and other Governments, as appropriate, considering the negative impacts of climate change on biodiversity and related traditional knowledge, innovations and practices of indigenous and local communities, to apply the ecosystem approach and to make use of existing publications such as Convention on Biological Diversity Technical Series Nos. 10 and 25 and the UNEP/IUCN TEMATEA Issue-Based Module on Climate Change and Biodiversity when planning or implementing mutually supportive activities among the three Rio conventions with regard to biodiversity, combating desertification/land degradation and climate change at the national and international levels.

C. Ocean Fertilization

The Conference of the Parties,

Notes the work of the London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (1972) and the 1996 London Protocol, *welcomes* the decision of the twenty-ninth Consultative Meeting of the Contracting Parties held from 5 to 9 November 2007, which: (i) endorsed the June 2007 "Statement of Concern regarding iron fertilization of the oceans to sequester CO_2" of their Scientific Groups, (ii) urged States to use the utmost caution when considering proposals for large-scale ocean fertilization operations and (iii) took the view that, given the present state of knowledge regarding ocean fertilization, large-scale operations were currently not justified:

1. *Requests* the Executive Secretary to bring the issue of ocean fertilization to the attention of the Joint Liaison Group;

2. *Urges* Parties and other Governments to act in accordance with the decision of the London Convention;

3. *Recognizes* the current absence of reliable data covering all relevant aspects of ocean fertilization, without which there is an inadequate basis on which to assess their potential risks;

4. *Bearing in mind* the ongoing scientific and legal analysis occurring under the auspices of the London Convention (1972) and the 1996 London Protocol, *requests* Parties and *urges* other Governments, in accordance with the precautionary approach, to ensure that ocean fertilization activities do not take place until there is an adequate scientific basis on which to justify such activities, including assessing associated risks, and a global, transparent and effective control and regulatory mechanism is in place for these activities; with the exception of small scale scientific research studies within coastal waters. Such studies should only be authorized if justified by the need to gather specific scientific data, and should also be subject to a thorough prior assessment of the potential impacts of the research studies on the marine environment, and be strictly controlled, and not be used for generating and selling carbon offsets or any other commercial purposes;

5. *Requests* the Executive Secretary to disseminate the results of the ongoing scientific and legal analysis under the London Convention and London Protocol, and any other relevant scientific and technical information, to the fourteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice.

D. Summary of the findings of the global Assessment on Peatlands, Biodiversity and Climate Change

The Conference of the Parties

Recognizing the importance of the conservation and sustainable use of the biodiversity of wetlands and, in particular, peatlands in addressing climate change and *noting with appreciation* the findings of the global Assessment on Peatlands, Biodiversity and Climate Change,

1. *Invites* the Global Environment Centre, subject to available resources, to translate into other United Nations languages, and further disseminate the global Assessment on Peatlands, Biodiversity and Climate Change;

2. *Encourages* Parties and other Governments to strengthen collaboration with the Ramsar Convention on Wetlands and promote the participation of interested organizations in the implementation of the Guidelines for Global Action on Peatlands and other actions, such as the ones listed in the global Assessment of Peatlands, Biodiversity and Climate Change, that could contribute to the conservation and sustainable use of peatlands;

3. *Welcomes* the initiative of the Scientific and Technical Review Panel of the Ramsar Convention to consider wetlands and climate change as an important emerging issue, *invite*s the Secretariat and the Scientific and Technical Review Panel of the Ramsar Convention, subject to available resources, to further assess the contribution of biodiversity to climate-change mitigation and adaptation in peatlands and other wetlands and *further invites* the Secretariat and the Scientific and Technical Review Panel of the Ramsar Convention to make the reports on these assessments available, for example through its website;

4. *Requests* the Subsidiary Body on Scientific, Technical and Technological Advice to explore ways to engage with the Intergovernmental Panel on Climate Change in planning and preparing its next assessment reports and *invites* the Intergovernmental Panel on Climate Change to participate in the Convention on Biological Diversity and Ramsar processes of preparing future technical studies on climate change and biodiversity, particularly on wetlands;

5. *Requests* the Executive Secretary, in collaboration with the Secretariat of the Ramsar Convention, and subject to available resources, to conduct an analysis of the potential of incentive measures and funding mechanisms under climate-change adaptation and mitigation in supporting biodiversity conservation and sustainable use in wetlands as well as in supporting local livelihoods and contributing to poverty eradication and *further requests* the Executive Secretary to explore ways to engage with those national and international research centres (e.g. CGIAR centres) addressing climate-change adaptation and mitigation in relation to wetlands biodiversity;

6. *Invites* the Conference of the Parties to the Ramsar Convention, at its tenth meeting, to consider appropriate action in relation to wetlands, water, biodiversity and climate change in view of the importance of this subject for the conservation and sustainable use of biodiversity and human welfare.

Annex I

ACTIVITIES THAT ARE ALREADY ONGOING OR HAVE BEEN CALLED FOR BY PARTIES IN THE FRAMEWORK OF THE RIO CONVENTIONS

1. Keep staff in other secretariats informed of discussions and decisions on relevant synergistic activities or programmes.

2. Continuing the sharing of experiences by secretariat staff in forums such as the Convention on Biological Diversity Ad Hoc Technical Expert Group on Technology Transfer and the United Nations Framework Convention on Climate Change Expert Group on Technology Transfer or its successor.

3. Continue the provision by the secretariats, of inputs and views on forest issues and adaptation as requested by the subsidiary bodies of the conventions.

4. Share experiences reported by Parties on communication, education and public-awareness events.

Annex II

INDICATIVE LIST OF ACTIVITIES BY PARTIES TO PROMOTE SYNERGIES AMONG THE RIO CONVENTIONS

Collaboration amongst national focal points

1. Schedule periodic meetings between focal points and focal point teams.

2. Establish a national coordinating committee for implementation of the three Rio conventions including, as appropriate, mainstreaming into sustainable development strategies, the Millennium Development Goals and other relevant sectors and strategies.

3. Engage, when relevant, focal points from other conventions when forming a position for negotiations.

Cooperation on national-level planning

4. Review existing national plans to identify gaps in synergies.

5. Identify relevant sector plans and policies that could benefit from cooperation on biodiversity, desertification and climate change.

6. Revise relevant plans and policies, as appropriate to enhance cooperation.

7. Build institutional and scientific capacity and raise awareness among different ministries, policy makers and non-governmental organizations dealing with the three Rio conventions and other relevant conventions.

Collaboration at the level of convention bodies and secretariats

8. Provide input, as appropriate, to the Joint Liaison Group.

Technology transfer

9. Provide inputs to the technology transfer databases of the three conventions.

10. Prepare, as appropriate, transparent impact assessments and risk analysis on the transferred technologies taking into consideration economic viability, social acceptability and environmental benefits.

11. Enhance cooperation among national focal points for the implementation of the programme of work on technology transfer under the Convention on Biological Diversity through, for example, the designation of appropriate institutions acting as a central consulting point for technology transfer.

12. Identify technologies of joint interest and relevance at a regional and global scale.

Forests and climate change

13. Integrate biodiversity, climate change and desertification/land degradation issues in forest sector planning.

14. Involve focal points from the United Nations Forum on Forests and relevant forest related and other conventions in discussions on relevant issues, such as, reducing emissions from deforestation and forest degradation, as well as through afforestation and reforestation, and, the in-depth review of implementation of the programme of work on forest biodiversity and other relevant issues.

Climate-change adaptation

15. Enhance the integration of biodiversity and desertification/land degradation issues within climate change adaptation planning.

16. Enhance consideration of the benefits for climate change adaptation of cross-sector planning in the context of the ecosystem approach.

17. Evaluate, as appropriate, the extent to which biodiversity and desertification/land degradation issues are integrated into existing climate change adaptation plans.

18. Subject to national capacity and the availability of funds, identify areas which are vulnerable to the impacts of climate change, contain high levels of biodiversity or biodiversity at risk, and are exposed to desertification/land degradation.

Capacity-building

19. Clearly express capacity-building needs to the secretariats.

Research and monitoring/systematic observation

20. Conduct, as appropriate, national and local assessments of climate-change impacts on biodiversity and desertification/land degradation.

21. Identify, as appropriate, local and indigenous knowledge that can contribute to synergies.

22. Identify research and/or monitoring needs and establish mechanisms or processes by which such needs could be met.

23. Encourage additional research on the impacts of climate change on oceans and marine biodiversity.

24. Encourage additional research and monitoring on the impacts of increased frequency and intensity of extreme weather events on biodiversity and associated resources.

25. Identify actions that contribute to the conservation and sustainable use of peatlands and other wetlands and enhance their positive contribution to climate change response activities.

26. Identify the impacts of climate change on ecosystem services.

27. Harmonize temporal and spatial scales in data collection and analysis considering climate change and biodiversity status and trends.

Information exchange and outreach

28. Share at regional and global levels, experiences and lessons learned on communicating synergies.

29. Develop a common pool of experts on the interrelated issues of climate change, biodiversity and combating desertification/land degradation to address the information gaps on the status, trends and threats to biodiversity, particularly within dry and sub-humid lands.

Harmonized reporting

30. National focal points share, to the extent possible, databases containing reporting data and information sources.

31. Where relevant, focal points work together on drafting the national reports for each convention.

Annex III

TERMS OF REFERENCE OF AN AD HOC TECHNICAL EXPERT GROUP (AHTEG) ON BIODIVERSITY AND CLIMATE CHANGE

1. The purpose of this Ad Hoc Technical Expert Group (AHTEG) on Biodiversity and Climate Change is to provide biodiversity-relevant information to the United Nations Framework Convention on Climate Change.

2. The AHTEG shall be guided by relevant outcomes from the Conference of the Parties and the subsidiary bodies of the UNFCCC, and on other bodies as appropriate and shall draw on CBD Technical Series No. 10 and No. 25, the outcomes from the workshops convened by the Secretariat of the United Nations Framework Convention on Climate Change under the Nairobi work programme as well as the documents compiled under this programme, and other relevant documents including the reports of the Intergovernmental Panel on Climate Change and the Millennium Ecosystem Assessment.

3. The AHTEG shall be established in accordance with the procedures outlined in the consolidated *modus operandi* of SBSTTA (decision VIII/10, annex III) and considering the results presented by the group of experts on biodiversity and adaptation to climate change regarding ecosystem vulnerability to the impacts of climate change and climate change response measures within the framework of the programmes of work of the Convention on Biological Diversity and shall have the following terms of reference: provide scientific and technical advice and assessment on the integration of the conservation and sustainable use of biodiversity into climate change mitigation and adaptation activities through *inter alia*:

(a) Identifying relevant tools, methodologies and best practice examples for assessing the impacts on and vulnerabilities of biodiversity as a result of climate change;

(b) Highlighting case-studies and identifying methodologies for analysing the value of biodiversity in supporting adaptation in communities and sectors vulnerable to climate change;

(c) Identifying case-studies and general principles to guide local and regional activities aimed at reducing risks to biodiversity values associated with climate change;

(d) Identifying potential biodiversity-related impacts and benefits of adaptation activities, especially in the regions identified as being particularly vulnerable under the Nairobi work programme (developing countries, especially least developed countries and small island developing States);

(e) Identifying ways and means for the integration of the ecosystem approach in impact and vulnerability assessment and climate change adaptation strategies;

(f) Identifying measures that enable ecosystem restoration from the adverse impacts of climate change which can be effectively considered in impact, vulnerability and climate change adaptation strategies;

(g) Analysing the social, cultural and economic benefits of using ecosystem services for climate change adaptation and of maintaining ecosystem services by minimizing adverse impacts of climate change on biodiversity.

(h) Proposing ways and means to improve the integration of biodiversity considerations and traditional and local knowledge related to biodiversity within impact and vulnerability assessments and climate change adaptation, with particular reference to communities and sectors vulnerable to climate change.

(i) Identifying opportunities to deliver multiple benefits for carbon sequestration, and biodiversity conservation and sustainable use in a range of ecosystems including peatlands, tundra and grasslands;

(j) Identifying opportunities for, and possible negative impacts on, biodiversity and its conservation and sustainable use, as well as livelihoods of indigenous and local communities, that may arise from reducing emissions from deforestation and forest degradation;

(k) Identifying options to ensure that possible actions for reducing emissions from deforestation and forest degradation do not run counter to the objectives of the CBD but rather support the conservation and sustainable use of biodiversity;

(l) Identifying ways that components of biodiversity can reduce risk and damage associated with climate change impacts;

(m) Identifying means to incentivise the implementation of adaptation actions that promote the conservation and sustainable use of biodiversity.

4. The work of the AHTEG should be initiated as soon as possible in order to provide a completed report for consideration by the SBSTTA prior to the tenth meeting of the Conference of the Parties; and provide information on these deliberations to the relevant UNFCCC processes.

5. The selection of the experts shall be in accordance with annex III of decision VIII/10 and shall include representatives of indigenous and local communities.

6. Parties are encouraged to take into consideration, the need for scientific and technical expertise in the AHTEG also from, *inter alia*, UNFCCC and other relevant intergovernmental organizations and processes when nominating their experts.

7. In preparing documentation for the AHTEG meetings, especially noting the need to ensure scientific credibility and timely information to the UNFCCC processes, *inter alia*, the following steps should be taken subject to the availability of financial resources:

(a) Parties, other Governments, relevant intergovernmental organization and processes, indigenous and local communities and other relevant stakeholders should be invited to submit their views, best practice examples and further relevant information on items included in the paragraph 1 above to the Executive Secretary; and

(b) An ad hoc Internet-based discussion group or an online conference should be convened by the Executive Secretary in multiple languages, so as to support the meeting of the Ad Hoc Technical Expert Group identifying major issues related to the items included in its terms of reference in paragraph 3 above.

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DECISION ADOPTED BY THE CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY AT ITS TENTH MEETING

X/33. Biodiversity and climate change

The Conference of the Parties

1. *Takes note* of the report of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change[1] and *encourages* Parties, other Governments, and relevant organizations, and *requests* the Executive Secretary, to take its findings into consideration, where appropriate, when carrying out work on biodiversity and climate change;

2. *Recognizes* that the loss of biodiversity and its potential damage is one impact of, *inter alia*, climate change;

3. *Notes* the ongoing discussions on issues relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries under the United Nations Framework Convention on Climate Change and its importance in helping achieve the objectives of both the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change; and *encourages* Parties to promote the importance of biodiversity considerations in ongoing discussions on this issue;

4. *Recognizes* that by improving the provision of financial support for biodiversity conservation and sustainable use including through new and additional financial resources, in accordance with Article 20 of the Convention as part of a portfolio of climate-change adaptation and mitigation measures, applied both within and beyond protected areas in developing countries, in particular the least developed and small island developing States, as well as countries with economies in transition, including through the LifeWeb initiative, amongst others, some of the challenges caused by climate change and its affects on biodiversity can also be addressed;

5. *Recognizes also* the urgent need of developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition, for the provision of financial support, including new and additional financial resources in accordance with Article 20 of the Convention as well as technical assistance to address the challenges to biodiversity from climate change, especially with regards to vulnerability and adaptation, and *urges* developed countries to fully fulfil their financial commitments to developing countries under the Convention, to support their efforts in addressing the impacts of climate change on biodiversity and *invites* donors to consult with the

[1] UNEP/CBD/SBSTTA/14/INF/21.

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In order to minimize the environmental impacts of the Secretariat's processes, and to contribute to the Secretary-General's initiative for a C-Neutral UN, this document is printed in limited numbers. Delegates are kindly requested to bring their copies to meetings and not to request additional copies.

Executive Secretary on ways and means to provide adequate support to developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition, for the better implementation of the decisions of the Conference of the Parties on biodiversity and climate change;

6. *Invites* the Global Environment Facility to consult with the Executive Secretary on ways and means to better inform its Implementing Agencies about decisions made by the Conference of the Parties on biodiversity and climate change, especially those related to enhancing cooperation between the Rio conventions, in order to facilitate the Parties efforts pursuant to such decisions;

7. *Suggests* that Parties consider developing mechanisms to streamline reporting and data collection related to the biodiversity and climate change interface at the national and subnational level, in accordance with national circumstances;

8. *Invites* Parties and other Governments, according to national circumstances and priorities, as well as relevant organizations and processes, to consider the guidance below on ways to conserve, sustainably use and restore biodiversity and ecosystem services while contributing to climate-change mitigation and adaptation:

Assessing the impacts of climate change on biodiversity

(a) Identify, monitor and address the impacts of climate change and ocean acidification on biodiversity and ecosystem services, and assess the future risks for biodiversity and the provision of ecosystem services using the latest available vulnerability and impact assessment frameworks and guidelines;

(b) Assess the impacts of climate change on biodiversity and biodiversity-based livelihoods, particularly with regard to livelihoods within those ecosystems that have been identified as being particularly vulnerable to the negative impacts of climate change with a view to identifying adaptation priorities;

Reducing the impacts of climate change on biodiversity and biodiversity-based livelihoods

(c) Reduce the negative impacts from climate change as far as ecologically feasible, through conservation and sustainable management strategies that maintain and restore biodiversity;

(d) Implement activities to increase the adaptive capacity of species and the resilience of ecosystems in the face of climate change, including, *inter alia*:

(i) Reducing non-climatic stresses, such as pollution, over-exploitation, habitat loss and fragmentation and invasive alien species;

(ii) Reducing climate-related stresses, where possible, such as through enhanced adaptive and integrated water resource and marine and coastal management;

(iii) Strengthening protected area networks including through the use of connectivity measures such as the development of ecological networks and ecological corridors and the restoration of degraded habitats and landscapes in accordance with decision IX/18 on protected areas and the programme of work on protected areas (goal 1.2, activity 1.2.3);

(iv) Integrating biodiversity into wider seascape and landscape management;

(v) Restoring degraded ecosystems and ecosystem functions; and

(vi) Facilitating adaptive management by strengthening monitoring and evaluation systems;

(e) Bearing in mind that under climate change, natural adaptation will be difficult and recognizing that *in situ* conservation actions are more effective, also consider *ex situ* measures, such as relocation, assisted migration and captive breeding, among others, that could contribute to maintaining the adaptive capacity and securing the survival of species at risk, taking into account the precautionary

approach in order to avoid unintended ecological consequences including, for example, the spread of invasive alien species;

(f) Develop a strategy for biodiversity conservation and sustainable use, including landscape and seascape management in those areas that are becoming accessible to new uses as a consequence of climate change;

(g) Take specific measures:

(i) For species that are vulnerable to climate change, including migratory species; and

(ii) To maintain genetic diversity in the face of climate change taking into account paragraph 2 of Annex I to the Convention;

(h) Undertake awareness-raising and capacity-building strategies on the key role of biodiversity conservation and sustainable use as a mechanism for climate-change mitigation and adaptation;

(i) Recognize the role of indigenous and local community conserved areas in strengthening ecosystem connectivity and resilience across the sea and landscape thereby maintaining essential ecosystem services and supporting biodiversity–based livelihoods in the face of climate change;

Ecosystem-based approaches for adaptation

(j) Recognizing that ecosystems can be managed to limit climate change impacts on biodiversity and to help people adapt to the adverse effects of climate change; implement where appropriate, ecosystem-based approaches for adaptation, that may include sustainable management, conservation and restoration of ecosystems, as part of an overall adaptation strategy that takes into account the multiple social, economic and cultural co-benefits for local communities;

(k) In accordance with national capacities and circumstances, integrate ecosystem-based approaches for adaptation into relevant strategies, including adaptation strategies and plans, national action plans to combat desertification, national biodiversity strategies and action plans, poverty reduction strategies, disaster-risk reduction strategies and sustainable land management strategies;

(l) In the planning and implementation of ecosystem-based approaches for adaptation, carefully consider different ecosystem management options and objectives to assess the different services they provide and the potential trade-offs that may result from them;

Ecosystem-based approaches for mitigation

(m) Consider the achievement of multiple benefits, including ecological, social, cultural and economic benefits, between ecosystem-based approaches for climate change mitigation and adaptation activities;

(n) Implement ecosystem-management activities, including the protection of natural forests, natural grasslands and peatlands, the sustainable management of forests considering the use of native communities of forest species in reforestation activities, sustainable wetland management, restoration of degraded wetlands and natural grasslands, conservation of mangroves, salt marshes and seagrass beds, sustainable agricultural practices and soil management, amongst others, as a contribution towards achieving and consistent with, the objectives of the United Nations Framework Convention on Climate Change, the United Nations Convention to Combat Desertification, the Ramsar Convention on Wetlands and the Convention on Biological Diversity;

(o) In forest landscapes subject to harvesting, clearing and/or degradation, implement, as appropriate, improved land management, reforestation and forest restoration prioritizing the use of native communities of species, to improve biodiversity conservation and associated services while sequestering carbon and limiting the degradation and clearing of native primary and secondary forests;

(p) When designing, implementing and monitoring afforestation, reforestation and forest restoration activities for climate-change mitigation consider conservation of biodiversity and ecosystem services through, for example:

(i) Converting only land of low biodiversity value or ecosystems largely composed of non-native species, and preferably degraded ones;

(ii) Prioritizing, whenever feasible, local and acclimated native tree species when selecting species for planting;

(iii) Avoiding invasive alien species;

(iv) Preventing net reduction of carbon stocks in all organic carbon pools;

(v) Strategically locating afforestation activities within the landscape to enhance connectivity and increase the provision of ecosystem services within forest areas;

(q) Enhance the benefits for, and avoid negative impacts on, biodiversity from reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries, and other sustainable land management and biodiversity conservation and sustainable-use activities, taking into account the need to ensure the full and effective participation of indigenous and local communities in relevant policy-making and implementation processes, where appropriate; and to consider land ownership and land tenure, in accordance with national legislation;

(r) Assess, implement and monitor a range of sustainable activities in the agricultural sector that may result in the maintenance and potential increase of current carbon stocks and, at the same time, the conservation and sustainable use of biodiversity;

(s) Where appropriate, promote biodiversity conservation, especially with regard to soil biodiversity, while conserving and restoring organic carbon in soil and biomass, including in peatlands and other wetlands as well as in grasslands, savannahs and drylands;

(t) Enhance the conservation, sustainable use and restoration of marine and coastal habitats that are vulnerable to the effects of climate change or which contribute to climate-change mitigation, such as mangroves, peatlands, tidal salt-marshes, kelp forests and seagrass beds, as a contribution to achieving the objectives of the United Nation Framework Convention on Climate Change, the United Nations Convention to Combat Desertification, the Ramsar Convention on Wetlands and the Convention on Biological Diversity;

Reducing biodiversity impacts of climate change mitigation and adaptation measures

(u) Based on national circumstances, increase positive and reduce negative impacts of climate-change mitigation and adaptation measures on biodiversity *inter alia*, based on results from strategic environmental assessments (SEAs)[2] and environmental impact assessments (EIAs) that facilitate the consideration of all available climate-change mitigation and adaptation options;

(v) In planning and implementing effective climate-change mitigation and adaptation activities, including renewable energies, take into account impacts on biodiversity and the provision of ecosystem services and avoid the conversion or degradation of areas important for biodiversity through:

(i) Considering traditional knowledge, including the full involvement of indigenous and local communities;

(ii) Building on a scientifically credible knowledge base;

[2] Decision VIII/28 (Voluntary guidelines on biodiversity-inclusive impact assessment).

(iii) Considering components of biodiversity important for its conservation and sustainable use;

(iv) Applying the ecosystem approach; and

(v) Developing ecosystem and species vulnerability assessments;

(w) Ensure, in line and consistent with decision IX/16 C, on ocean fertilization and biodiversity and climate change, in the absence of science based, global, transparent and effective control and regulatory mechanisms for geo-engineering, and in accordance with the precautionary approach and Article 14 of the Convention, that no climate-related geo-engineering activities[3] that may affect biodiversity take place, until there is an adequate scientific basis on which to justify such activities and appropriate consideration of the associated risks for the environment and biodiversity and associated social, economic and cultural impacts, with the exception of small scale scientific research studies that would be conducted in a controlled setting in accordance with Article 3 of the Convention, and only if they are justified by the need to gather specific scientific data and are subject to a thorough prior assessment of the potential impacts on the environment;

(x) Make sure that ocean-fertilization activities are addressed in accordance with decision IX/16 C, acknowledging the work of the London Convention/London Protocol;

Valuation and incentive measures

(y) Take into account the values of biodiversity and ecosystem services when planning and undertaking climate-change-related activities by using a range of valuation techniques;

(z) Consider, as appropriate, incentives to facilitate climate-change-related activities that take into consideration biodiversity and related social and cultural aspects, consistent and in harmony with the Convention on Biological Diversity and other relevant international obligations;

9. *Requests* the Executive Secretary to:

(a) Collaborate with the United Nations Environment Programme and the United Nations Development Programme in reviewing and revising the resource kit for national capacity self-assessments (NCSAs) with a view to ensuring that implementation of activities identified in the such assessments better reflects decisions of the Conference of the Parties on biodiversity and climate change, particularly those related to enhancing the capacity of developing countries to implement decision IX/16 on biodiversity and climate change and to report progress of this action to the Subsidiary Body on Scientific, Technical and Technological Advice at a meeting prior to the eleventh meeting of the Conference of the Parties;

(b) Collaborate with relevant international organizations to collect scientific knowledge and case-studies and identify knowledge gaps on the links between biodiversity conservation and sustainable use and organic carbon stock conservation and restoration, and make the results available to Parties through the clearing-house mechanism;

(c) Collaborate with relevant international organizations to expand and refine analyses identifying areas of high potential for the conservation and restoration of carbon stocks, as well as of ecosystem management measures that make best use of related climate change mitigation opportunities, and make this information openly available, such as to assist with integrated land-use planning;

[3] Without prejudice to future deliberations on the definition of geo-engineering activities, understanding that any technologies that deliberately reduce solar insolation or increase carbon sequestration from the atmosphere on a large scale that may affect biodiversity (excluding carbon capture and storage from fossil fuels when it captures carbon dioxide before it is released into the atmosphere) should be considered as forms of geo-engineering which are relevant to the Convention on Biological Diversity until a more precise definition can be developed. It is noted that solar insolation is defined as a measure of solar radiation energy received on a given surface area in a given hour and that carbon sequestration is defined as the process of increasing the carbon content of a reservoir/pool other than the atmosphere.

(d) Gather existing tools for assessing the direct and indirect impacts of climate change on biodiversity;

(e) Support, as appropriate, Parties and relevant organizations and processes to design and implement ecosystem-based approaches for mitigation and adaptation as they relate to biodiversity;

(f) Convene, subject to the availability of financial resources, in collaboration with the Secretariat of the United Nations Framework Convention on Climate Change an expert workshop, with the full and effective participation of experts from developing countries on reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries, with a view to enhancing the coordination of capacity-building efforts on issues related to biodiversity and ecosystem-based carbon sequestration and the conservation of forest carbon stocks;

(g) With regard to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries, collaborate with the secretariat of the United Nations Forum on Forests, the Facility Management Team of the Forest Carbon Partnership Facility and the Climate Investment Funds Administrative Unit of the World Bank, the secretariat of the United Nations Framework Convention on Climate Change, the secretariat of the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries, and the other members of Collaborative Partnership on Forests, as well as the Low Forest Cover Countries secretariat and in collaboration with Parties through their national focal points for the Convention on Biological Diversity to provide advice, for approval by the Conference of the Parties at its eleventh meeting, including on the application of relevant safeguards for biodiversity, without pre-empting any future decisions taken under the United Nations Framework Convention on Climate Change, based on effective consultation with Parties and their views, and with the participation of indigenous and local communities, so that actions are consistent with the objectives of the Convention on Biological Diversity and avoid negative impacts on and enhance benefits for biodiversity;

(h) With effective consultation with Parties and based on their views and in collaboration with the Collaborative Partnership on Forests, identify possible indicators to assess the contribution of reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries to achieving the objectives of the Convention on Biological Diversity, and assess potential mechanisms to monitor impacts on biodiversity from these and other ecosystem-based approaches for climate change mitigation measures, without pre-empting any future decisions taken under the United Nations Framework Convention on Climate Change, and to report on progress to the Subsidiary Body on Scientific, Technical and Technological Advice at a meeting prior to the eleventh meeting of the Conference of the Parties;

(i) Bring to the attention of relevant organizations the knowledge and information gaps identified by Parties through their national reports that prevent the integration of biodiversity considerations into climate change-related activities and report on activities undertaken by such organizations to address such gaps;

(j) Compile current and additional views and case-studies from Parties on the integration of biodiversity into climate-change-related activities for submission to the United Nations Framework Convention on Climate Change for publication on its website as appropriate and to report thereon to the conferences of the parties to the Convention on Biological Diversity, the United Nations Framework on Climate Change and the United Nations Convention to Combat Desertification;

(k) Develop proposals on actions to address the obstacles listed in section IV of the compilation of views submitted by Parties on ways to integrate biodiversity considerations into climate

change-related activities[4] for the consideration of the Subsidiary Body on Scientific, Technical and Technological Advice at a meeting prior to the eleventh meeting of the Conference of the Parties;

(l) Compile and synthesize available scientific information, and views and experiences of indigenous and local communities and other stakeholders, on the possible impacts of geo-engineering techniques on biodiversity and associated social, economic and cultural considerations, and options on definitions and understandings of climate-related geo-engineering relevant to the Convention on Biological Diversity and make it available for consideration at a meeting of the Subsidiary Body on Scientific, Technical and Technological Advice prior to the eleventh meeting of the Conference of the Parties;

(m) Taking into account the possible need for science based global, transparent and effective control and regulatory mechanisms, subject to the availability of financial resources, undertake a study on gaps in such existing mechanisms for climate-related geo-engineering relevant to the Convention on Biological Diversity, bearing in mind that such mechanisms may not be best placed under the Convention on Biological Diversity, for consideration by the Subsidiary Body on Scientific Technical and Technological Advice prior to a future meeting of the Conference of the Parties and to communicate the results to relevant organizations;

(n) Compile information, including existing guidelines on invasive alien species and related management responses, noting the need for the adaptation of biodiversity and ecosystems to climate change, as well as the need to reduce the impacts of existing and potentially new invasive alien species;

(o) Develop proposals on options for addressing gaps in knowledge and information on the impact of climate change on biodiversity outlined in the report of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change for consideration of a meeting of the Subsidiary Body on Scientific, Technical and Technological Advice prior to the eleventh meeting of the Conference of the Parties ;

(p) Contribute to the update and maintenance of the TEMATEA issue-based module on biodiversity and climate change as a tool for better implementation of decisions related to biodiversity and climate change;

10. *Further requests* the Executive Secretary to include biodiversity considerations related to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries and the recommendations of the Global Expert Workshop on Biodiversity Benefits of Reducing Emissions from Deforestation and Forest Degradation in Developing Countries held in Nairobi from 20 to 23 September 2010 when conveying a proposal to develop joint activities between the three Rio conventions to the secretariats of the United Nations Framework Convention on Climate Change and the United Nations Convention to Combat Desertification as contained in the present decision and to convey this information to the secretariat of the United Nations Framework Convention on Climate Change for appropriate consideration prior to the seventeenth meeting of the Conference of the Parties to the United Nations Framework Convention on Climate Change;

Climate change and the biodiversity of dry and sub-humid lands

11. *Invites* Parties and other Governments and relevant organizations to develop down-scaled climate change models that combine temperature and precipitation information with multi-stressor biological models in order to better predict the impacts of drought and increased climate variability on biodiversity;

[4] UNEP/CBD/SBSTTA/14/INF/22.

12. *Encourages* Parties, other Governments and relevant organizations to make use of the information contained in the note by the Executive Secretary[5] in their future work on implementation of the programme of work on the biodiversity of dry and sub-humid lands;

13. *Bearing in mind* the respective independent legal status and mandates of the three Rio conventions and the different composition of Parties, and the need to avoid duplication and promote resource efficiency and, based upon this, for the purpose of enhancing the capacity of countries, particularly developing countries, to implement the decisions of the Conference of the Parties' related to biodiversity, climate change and desertification/land degradation and to promote cooperation, noting the actions in decision IX/16 and the current serious knowledge and information gap in evaluating biological vulnerability as a result of climate change:

(a) *Requests* the Executive Secretary to convey a proposal to develop joint activities, between the three Rio conventions, to the secretariats of the United Nations Framework Convention on Climate Change and the United Nations Convention to Combat Desertification; and

(b) *Invites* the conferences of the parties to the United Nations Framework Convention on Climate Change and the United Nations Convention to Combat Desertification to collaborate with the Convention on Biological Diversity, through the Joint Liaison Group of the three Rio conventions, as appropriate, with a view to:

(i) Including the development of joint activities in the agenda of the next meeting of the Joint Liaison Group of the three Rio conventions, and to consider, as appropriate, the proposed elements on joint activities regarding climate change, biodiversity, and land degradation and ecosystem-based approaches to climate-change mitigation and adaptation contained in decision IX/16;

(ii) Exploring the possibility of convening, subject to the availability of financial resources and prior to Rio+20, a joint preparatory meeting between the three Rio conventions, including, if appropriate, the participation of indigenous and local communities, to consider possible joint activities while respecting existing provisions and mandates, and to identify areas for Party-driven collaboration and submit these to the next Conferences of the Parties to each of the three conventions for their consideration;

(iii) Consulting the Bureau of the Preparatory Committee of the United Nations Conference on Sustainable Development 2012 (Rio +20) and to explore with, the Bureau, how to make use of this preparatory work in connection with Rio+20;

(iv) Exploring the possibility of convening meetings of national and/or subsidiary body focal points, bearing in mind the need to avoid additional resource burdens, to contribute to the process of cooperation;

14. *Invites* national focal points for the Convention on Biological Diversity to inform their national counterparts for the United Nations Framework Convention on Climate Change and the United Nations Convention to Combat Desertification about the above requests with a view to initiating discussions within their relevant processes;

15 *Invites* Parties and other Governments to identify and disseminate, good practices on cooperation for the implementation of the three Conventions at the national level, including implementation of the indicative list of activities contained in annex II of decision IX/16;

[5] UNEP/CBD/SBSTTA/14/6/Add.1.

Ways and means to achieve biodiversity co-benefits

16. *Requests* the Executive Secretary, subject to the availability of financial resources:

(a) Through the Joint Liaison Group, to develop best practices and a toolkit of lessons learned for Parties on the achievements of co-benefits for biodiversity, climate change and combating desertification/land degradation;

(b) Through the Joint Liaison Group, to publish a brochure on best practices for the achievement of co-benefits for biodiversity, climate change and combating desertification/land degradation;

(c) In collaboration with the Global Environment Facility, to identify indicators to measure and facilitate reporting on the achievement of social, cultural and economic benefits for biodiversity, climate change and combating desertification/land degradation*;*

(d) In collaboration with the Global Environment Facility and the its Implementing Agencies, to develop tools to evaluate and reduce the negative impacts of climate change mitigation and adaptation activities on biodiversity based on, *inter alia*, existing frameworks to analyse the potential environmental and cross-sectoral impacts of projects and the environmental safeguard policies in place within the Implementing Agencies of the Global Environment Facility;

17. *Invites* Parties and other Governments to consider the role of biodiversity and associated ecosystem services when climate-proofing / enhancing the climate resilience of investments, projects and programmes and to develop such strategies for biodiversity-related investments, projects and programmes.

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DECISION ADOPTED BY THE CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY AT ITS ELEVENTH MEETING

XI/19. Biodiversity and climate change related issues: advice on the application of relevant safeguards for biodiversity with regard to policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries

The Conference of the Parties,

Taking into account decision X/33 and decisions 1/CP.16, 2/CP.17 and 12/CP.17 of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC);

1. *Noting* that the Conference of the Parties to the United Nations Framework Convention on Climate Change, in paragraph 70 of decision 1/CP.16, encourages developing country Parties to contribute to mitigation actions in the forest sector by undertaking the following activities, as deemed appropriate by each Party and in accordance with their respective capabilities and national circumstances:

(a) Reducing emissions from deforestation;

(b) Reducing emissions from forest degradation;

(c) Conservation of forest carbon stocks;

(d) Sustainable management of forests;

(e) Enhancement of forest carbon stocks;

2. *Recalling* the guidance and safeguards adopted in UNFCCC decision 1/CP.16, appendix I, as well as noting the different approaches referred to in paragraphs 66 and 67 of UNFCCC decision 2/CP.17 and the guidance on systems for providing information on how safeguards are addressed and respected in UNFCCC decision 12/CP.17;

3. *Further noting* that paragraph 74 of UNFCCC decision 1/CP.16 recognizes that the implementation of such activities depends on the specific national circumstances, capacities and capabilities of each developing country Party and the level of support received;

/…

In order to minimize the environmental impacts of the Secretariat's processes, and to contribute to the Secretary-General's initiative for a C-Neutral UN, this document is printed in limited numbers. Delegates are kindly requested to bring their copies to meetings and not to request additional copies.

4. *Noting* that relevant technical guidance for achieving benefits for biodiversity and indigenous and local communities in the context of the activities referred to in paragraph 1 above is available or under development at national, regional and international level;

5. *Noting* that the indicative list of indicators to assess progress towards the goals of the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets, as contained in recommendation XV/1 of the Subsidiary Body on Scientific, Technical and Technological Advice, could be useful for assessing the contributions of the activities referred to in paragraph 1 above for achieving the objectives of the Convention on Biological Diversity;

6. *Acknowledging* the large potential for synergies between the activities referred to in paragraph 1 above and the implementation of the Strategic Plan for Biodiversity 2011–2020 and its Aichi Biodiversity Targets, *urges* Parties, other Governments, and relevant organizations to fully implement the relevant provisions and decisions of the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change in a coherent and mutually supportive way;

7. *Invites* Parties, other Governments, and relevant organizations to continue and strengthen their efforts to promote the contribution of the activities referred to in paragraph 1 above to achieving the objectives of the Convention on Biological Diversity, and provide benefits for biodiversity and for indigenous and local communities, with particular attention to:

(a) Building synergies between national biodiversity strategies and action plans, and national strategies or action plans as referred to in paragraphs 71(a) and 72 of UNFCCC decision 1/CP.16;

(b) Further strengthening existing technology transfer and capacity-building processes for the elements referred to in paragraph 71 of UNFCCC decision 1/CP.16, with a view to building the synergies referred to in sub-paragraph (a);

8. *Notes* that the safeguards referred to in paragraph 2 of this decision may also enhance benefits for biodiversity and for indigenous and local communities, and invites developing countries to share their experiences and lessons learned when planning and implementing the activities referred to in paragraph 1;

9. *Takes note with appreciation* of the annex to this decision;

10. *Invites* developing country Parties to consider the information in the annex to this decision when planning and implementing the activities referred to in paragraph 1;

11. *Also invites* Parties, other Governments, and relevant organizations to consider the information in the annex when preparing national reports and other submissions on progress towards the Aichi Biodiversity Targets of the Strategic Plan for Biodiversity 2011–2020, and, where applicable, for other relevant submissions under other processes;

12. *Noting* that there are ongoing initiatives, processes and instruments focused on the conservation and sustainable use of forest biodiversity within the framework of sustainable forest management, *invites* Parties, other Governments and relevant organizations involved in these initiatives, processes and instruments to share their experiences and lessons learned related to safeguards, with a view to assisting developing countries in addressing biodiversity concerns and in achieving multiple benefits in relation to the implementation of the activities referred to in paragraph 1;

13. *Invites* Parties and other Governments, according to national circumstances and priorities, as well as relevant organizations and processes, to consider the relevant guidance in decision X/33,

paragraph 8 (m)-(q), (s), (u), (v), (y) and (z) when addressing safeguards for and multiple benefits of the activities referred to in paragraph 1;

14. *Also invites* Parties and other Governments, according to national circumstances and priorities, as well as relevant organizations and processes, to reduce the risk of displacement of deforestation and forest degradation to areas of lower carbon value and higher biodiversity value, and other adverse impacts to biodiversity and to indigenous and local communities;

15. *Requests* the Executive Secretary, subject to the availability of funds, to collate and summarize information, based on the systems for providing information on how safeguards are addressed and respected, as referred to in UNFCCC decision 12/CP.17, on experiences regarding how the potential effects of the activities referred to in paragraph 1 above on the traditional way of life and related knowledge and customary practices of indigenous and local communities are being addressed, and to submit this information to the Working Group on Article 8(j) and Related Provisions for its consideration, and *invites* the Working Group on Article 8(j) and Related Provisions to consider this information when undertaking its broader work, as appropriate;

16. *Also requests* the Executive Secretary, subject to the availability of funds, to:

(a) Enhance collaboration with the UNFCCC Secretariat and other members of the Collaborative Partnership on Forests (including its Global Forest Expert Panel on Biodiversity, Forest Management and REDD+), as well as with other relevant organizations and initiatives, to further support the efforts of Parties to promoting the contribution of the activities referred to in paragraph 1 above towards achieving the objectives of the Convention, including by offering further capacity-building activities;

(b) Compile information relevant to the application of safeguards for biodiversity, and make it widely available, including through the clearing-house mechanism;

(c) Submit a progress report on the activities referred to in paragraphs 16 (a) and (b) to the Conference of the Parties at its twelfth meeting;

17. *Further requests* the Executive Secretary, subject to the availability of funds, to compile information from Parties on initiatives and experiences regarding paragraph 67 of UNFCCC decision 2/CP.17 with regard to its possible contribution to the objectives of the Convention on Biological Diversity, without pre-judging any future decisions by the Conference of the Parties to UNFCCC, and to submit a progress report to the Conference of the Parties to the Convention on Biological Diversity at its twelfth meeting;

18. *Requests* the Executive Secretary to further develop advice on issues included in paragraph 9 (h) of decision X/33, taking into full account the relevant UNFCCC decisions, based on further views from Parties and in collaboration with the Collaborative Partnership on Forests, and to report to the Subsidiary Body on Scientific, Technical and Technological Advice prior to the thirteenth meeting of the Conference of the Parties.

Annex

1. With reference to relevant decisions and documents of the United Nations Framework Convention on Climate Change (UNFCCC), this annex relates to biodiversity-related safeguards.

2. The term "safeguards" in this annex refers to the biodiversity-related safeguards set out in UNFCCC decision 1/CP.16, appendix I, paragraph 2.

3. Safeguards are intended to reduce the risks, and may also enhance multiple benefits, of the activities referred to in paragraph 1 of decision XI/19, thereby supporting the credibility and long-term success of such activities.

4. The application of safeguards considers *inter alia* the following possible adverse impacts, as noted by the Global Expert Workshop[1] on Biodiversity Benefits from Reducing Emissions from Deforestation and Forest Degradation in Developing Countries:

(a) The conversion of natural forests to plantations and other land uses of low biodiversity value and low resilience;

(b) Displacement of deforestation and forest degradation to areas of lower carbon value and high biodiversity value;

(c) Increased pressure on non-forest ecosystems with high biodiversity value;

(d) Afforestation in areas of high biodiversity value;

(e) The loss of traditional territories and restriction of rights of indigenous and local communities to access to, use of and/or ownership of land and natural resources;

(f) Lack of tangible livelihood benefits to indigenous and local communities and lack of equitable benefit-sharing;

(g) Exclusion of indigenous and local communities from designing and implementation of policies and measures;

(h) Loss of traditional ecological knowledge.

5. Developing countries are in different stages of preparations for the activities referred to in paragraph 1 of decision XI/19, and when addressing and respecting safeguards, this should be taken into account. There is a need to further enhance capacity across developing countries, to address safeguards and to fully integrate biodiversity concerns into the planning and implementation of relevant strategies or activities.

6. When planning and implementing the activities referred to in paragraph 1 of decision XI/19, developing countries should promote and support safeguards as early as possible, in the context of the provision of adequate and predictable support, including financial resources and technical and technological support to developing country Parties.

[1] Global Expert Workshop on Biodiversity Benefits from Reducing Emissions from Deforestation and Forest Degradation in Developing Countries, Nairobi, 20-23 September 2010 (UNEP/CBD/WS-REDD/1/3).

7. By addressing safeguards, developing countries can also enhance multiple benefits from activities referred to in paragraph 1 of decision XI/19 for biodiversity and for indigenous and local communities, noting that:

(a) The timely and effective inter-sectoral coordination and synergies among and within relevant ministries are of great importance for the application of safeguards and achieving multiple benefits;

(b) Existing national forest programme processes could be used to accelerate progress and create synergies with overall national forest policy frameworks.

8. Clarifying tenure issues, as deemed appropriate by each Party, and in accordance with national priorities, objectives, circumstances, capabilities and national legislation, remains a challenge for many aspects of the activities referred to in paragraph 1 of decision XI/19, including for applying safeguards related to indigenous and local communities. This will require nationally specific solutions. Impacts on indigenous and local communities and benefit-sharing are closely linked to solving land tenure and rights issues, as deemed appropriate by each Party, and in accordance with national priorities, objectives, circumstances, capabilities and national legislation.

9. Land zoning and land-use planning, as deemed appropriate by each Party, and in accordance with national priorities, objectives, circumstances, capabilities and national legislation, would facilitate the application of safeguards. Particular attention to biodiversity issues may be needed when aiming to increase the forest area in the context of the activities referred to in paragraph 1 of decision XI/19, taking into account the multiple functions of forests.

10. Lack of benefits and/or lack of equitable distribution of benefits for relevant stakeholders, in particular for indigenous and local communities, are possible threats to the success of the activities referred to in paragraph 1 of decision XI/19.

11. Where appropriate, the activities referred to in paragraph 1 of decision XI/19 should acknowledge the shared responsibility of subnational and local levels, including indigenous and local communities, with regard to domestic forest governance to achieve sustainable use, management and conservation of forests, biodiversity and natural resources.

12. Existing biodiversity-related national level processes, policies, laws, regulations and experiences[2] could support the further integration of biodiversity concerns into national strategies or action plans, as referred to in paragraph 71 and 72 of UNFCCC decision 1/CP.16, including the application of safeguards. Well-designed national forest inventories, including through remote sensing, can also provide valuable - information relevant to biodiversity.

13. Specifically, national strategies or action plans, as referred to in paragraphs 71 and 72 of UNFCCC decision 1/CP.16, could benefit from national experience in implementing the following decisions of the Conference of the Parties to the Convention on Biological Diversity, as appropriate:

(a) The Strategic Plan for Biodiversity 2011-2020 and its Aichi Biodiversity Targets (decision X/2);

(b) The expanded programme of work on forest biodiversity (decisions VI/22 and IX/5);

[2] For example, in many countries, national biodiversity strategies and action plans or national or regional criteria for sustainable forest management already contain elements relevant for biodiversity safeguards. Other examples include national forest programmes, forest and protected area legislation, mechanisms for payments for ecosystem services, and community-based natural resource management.

(c) Voluntary guidelines on biodiversity-inclusive impact assessment (decision VIII/28);

(d) The ecosystem approach, and relevant operational-level guidance (decisions V/6 and VII/11);

(e) The Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity (decision VII/12, annex II);

(f) The Akwé: Kon voluntary guidelines for the conduct of cultural, environmental and social impact assessments regarding sacred sites and lands and waters traditionally occupied or used by indigenous and local communities (decision VII/16);

(g) Elements of the Tkarihwaié:ri Code of Ethical Conduct (decision X/42) as they pertain to research into, access to, and use, exchange and management of information concerning traditional knowledge, innovations and practices for the conservation and sustainable use of biological diversity; and

(h) Spatially explicit information on biodiversity priority areas, for example as developed by many countries in their national ecological gap analysis under the programme of work on protected areas (decision VII/28).

14. The risk of adverse impacts on biodiversity and on indigenous and local communities from displacement of deforestation and forest degradation could be addressed by:

(a) Applying the ecosystem approach and its operational guidance (decisions V/6 and VII/11) and utilizing standard criteria to identify sites of high biodiversity value so as to prioritize their conservation (decision X/31), when undertaking planning and activities referred to in paragraph 1 of decision XI/19;

(b) Promoting full and effective participation when developing and implementing national strategies or action plans and in all activities referred to in paragraph 1 of this decision at national and subnational levels, including of relevant stakeholders, in particular indigenous and local communities;

(c) Gathering information on the progress towards achieving relevant Aichi Biodiversity Targets and promoting regional and subregional collaboration on this activity, with technical and financial support for developing countries to this end.

15. To ensure that experience from the implementation of the decisions of the Conference of the Parties to the Convention on Biological Diversity referred to in paragraphs 13 and 14 above and other relevant information can inform and support the implementation of the activities referred to in paragraph 1 of decision XI/19, Parties and relevant organizations should make use of communication hubs and relevant forums to exchange information on a regular basis, drawing on national systems for providing information on how safeguards are addressed and respected.

16. In addition, the application of safeguards could also benefit from experiences under ongoing initiatives, processes and instruments focused on the conservation and sustainable use of forest biodiversity, including:

(a) The UN-REDD Programme[3] Social and Environmental Principles and Criteria;

[3] The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD).

(b) The Forest Carbon Partnership Facility Readiness Fund Strategic Environmental and Social Assessment and Common Approach to Environmental and Social Safeguards for Multiple Delivery Partners; and

(c) The REDD+ Social and Environmental Standards;

17. As per paragraph 13 of decision XI/19, the following relevant guidance in decision X/33, paragraph 8, should be considered when addressing safeguards for and multiple benefits of the activities referred to in paragraph 1 of decision XI/19:

(a) Consider the achievement of multiple benefits, including ecological, social, cultural and economic benefits, among ecosystem-based approaches for climate change mitigation and adaptation activities;

(b) Implement ecosystem management activities, including the protection of natural forests, natural grasslands and peatlands, and the sustainable management of forests, considering the use of native communities of forest species in reforestation activities;

(c) In forest landscapes subject to harvesting, clearing and/or degradation, implement, as appropriate, improved land management, reforestation and forest restoration, prioritizing the use of native communities of species, to improve biodiversity conservation and associated services while sequestering carbon and limiting the degradation and clearing of native primary and secondary forests;

(d) When designing, implementing and monitoring afforestation, reforestation and forest restoration activities for climate change mitigation, consider conservation of biodiversity and ecosystem services through, for example:

(i) Converting only land of low biodiversity value or ecosystems largely composed of non-native species, and preferably degraded ecosystems;

(ii) Prioritizing, whenever feasible, local and acclimated native tree species when selecting species for planting;

(iii) Avoiding invasive alien species;

(iv) Preventing net reduction of carbon stocks in all organic carbon pools;

(v) Strategically locating afforestation activities within the landscape to enhance connectivity and increase the provision of ecosystem services within forest areas;

(e) Enhance the benefits for, and avoid negative impacts on, biodiversity from reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries, and other sustainable land management and biodiversity conservation and sustainable-use activities, taking into account the need to ensure the full and effective participation of indigenous and local communities in relevant policy-making and implementation processes, where appropriate; and to consider land ownership and land tenure, in accordance with national legislation;

(f) Where appropriate, promote biodiversity conservation, especially with regard to soil biodiversity, while conserving and restoring organic carbon in soil and biomass, including in peatlands and other wetlands, as well as in grasslands, savannahs and drylands;

(g) Based on national circumstances, increase positive and reduce negative impacts of climate change mitigation and adaptation measures on biodiversity based, *inter alia*, on results from strategic environmental assessments and environmental impact assessments that facilitate the consideration of all available climate change mitigation and adaptation options;

(h) In planning and implementing effective climate change mitigation and adaptation activities, including renewable energies, take into account impacts on biodiversity and the provision of ecosystem services and avoid the conversion or degradation of areas important for biodiversity by:

(i) Considering traditional knowledge, including the full involvement of indigenous and local communities;

(ii) Building on a scientifically credible knowledge base;

(iii) Considering components of biodiversity that are important for its conservation and sustainable use;

(iv) Applying the ecosystem approach; and

(v) Developing ecosystem and species vulnerability assessments.

(i) Take into account the values of biodiversity and ecosystem services when planning and undertaking climate change related activities by using a range of valuation techniques;

(j) Consider, as appropriate, incentives to facilitate climate change related activities that take into consideration biodiversity and related social and cultural aspects, consistent and in harmony with the Convention on Biological Diversity and other relevant international obligations.

18. The Convention on Biological Diversity could contribute to the work of UNFCCC and relevant initiatives, processes and instruments to promote and support safeguards by disseminating information on the implementation of relevant guidance from the Convention on Biological Diversity, by supporting further capacity building efforts, and by providing information on the contribution of the activities referred to in paragraph 1 of decision XI/19 to achieving the objectives of the Convention on Biological Diversity, as per decision X/33.

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Agenda item 11.2

DECISION ADOPTED BY THE CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY AT ITS ELEVENTH MEETING

XI/20. Climate-related geoengineering

The Conference of the Parties

1. *Reaffirms* paragraph 8, including its subparagraph (w), of decision X/33;

2. *Takes note* of the report on the impacts of climate-related geoengineering on biological diversity (UNEP/CBD/SBSTTA/16/INF/28), the study on the regulatory framework for climate-related geoengineering relevant to the Convention on Biological Diversity (UNEP/CBD/SBSTTA/16/INF/29) and the overview of the views and experiences of indigenous and local communities and stakeholders (UNEP/CBD/SBSTTA/16/INF/30);

3. *Also takes note* of the main messages presented in the note by the Executive Secretary on technical and regulatory matters on geoengineering in relation to the Convention on Biological Diversity (UNEP/CBD/SBSTTA/16/10);

4. *Emphasizes* that climate change should primarily be addressed by reducing anthropogenic emissions by sources and by increasing removals by sinks of greenhouse gases under the United Nations Framework Convention on Climate Change, noting also the relevance of the Convention on Biological Diversity and other instruments;

5. *Aware* of existing definitions and understandings, including those in annex I to document UNEP/CBD/SBSTTA/16/INF/28, and ongoing work in other forums, including the Intergovernmental Panel on Climate Change, *notes*, without prejudice to future deliberations on the definition of geoengineering activities, that climate-related geoengineering may include:

(a) Any technologies that deliberately reduce solar insolation or increase carbon sequestration from the atmosphere on a large scale and that may affect biodiversity (excluding carbon capture and storage from fossil fuels when it captures carbon dioxide before it is released into the atmosphere) (decision X/33 of the Conference of the Parties);

/…

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(b) Deliberate intervention in the planetary environment of a nature and scale intended to counteract anthropogenic climate change and/or its impacts (UNEP/CBD/SBSTTA/16/10);[1]

(c) Deliberate large-scale manipulation of the planetary environment (32nd session of the Intergovernmental Panel on Climate Change);

(d) Technological efforts to stabilize the climate system by direct intervention in the energy balance of the Earth for reducing global warming (Fourth Assessment Report of the Intergovernmental Panel on Climate Change);[2]

6. *Notes* the findings contained in document UNEP/CBD/SBSTTA/16/INF/28, that there is no single geoengineering approach that currently meets basic criteria for effectiveness, safety and affordability, and that approaches may prove difficult to deploy or govern;

7. *Also notes* that there remain significant gaps in the understanding of the impacts of climate-related geoengineering on biodiversity, including:

(a) How biodiversity and ecosystem services are likely to be affected by and respond to geoengineering activities at different geographic scales;

(b) The intended and unintended effects of different possible geoengineering techniques on biodiversity;

(c) The socio-economic, cultural and ethical issues associated with possible geoengineering techniques, including the unequal spatial and temporal distribution of impacts;

8. *Notes* the lack of science-based, global, transparent and effective control and regulatory mechanisms for climate-related geoengineering, the need for a precautionary approach, and that such mechanisms may be most necessary for those geoengineering activities that have a potential to cause significant adverse transboundary effects, and those deployed in areas beyond national jurisdiction and the atmosphere, noting that there is no common understanding on where such mechanisms would be best placed;

9. *Invites* Parties to address the gaps identified in paragraph 7 and to report on measures undertaken in accordance with paragraph 8(w) of decision X/33;

10. *Reaffirming* the precautionary approach, *notes* the relevant resolutions of the meeting of the Contracting Parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter, 1972 (the London Convention) and its 1996 Protocol, and *recalls* decision IX/16 C of the Conference of the Parties, on ocean fertilization, and also decisions IX/30 and X/33, and paragraph 167 of the outcome document of United Nations Conference on Sustainable Development (Rio+20, "The Future We Want");[3]

11. *Notes* that the application of the precautionary approach as well as customary international law, including the general obligations of States with regard to activities within their jurisdiction or control and with regard to possible consequences of those activities, and requirements with regard to environmental impact assessment, may be relevant for geoengineering activities but would still form an incomplete basis for global regulation;

[1] Excluding carbon capture and storage at source from fossil fuels when it captures carbon dioxide before it is released into the atmosphere, and also excluding forest-related activities.

[2] Noting that this definition includes solar radiation management but does not encompass other geoengineering techniques.

[3] Adopted in General Assembly resolution 66/288.

12. *Further notes* the relevance of work done under the auspices of existing treaties and organizations for the governance of potential geoengineering activities, including the United Nations Convention on the Law of the Sea, the London Convention and its Protocol, the United Nations Framework Convention on Climate Change and its Kyoto Protocol, the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol, and regional conventions, as well as the United Nations General Assembly, the United Nations Environment Programme and the World Meteorological Organization;

13. *Requests* the Executive Secretary, subject to the availability of financial resources, to disseminate the reports referred to in paragraph 2 as widely as possible, including to the secretariats of the treaties and organizations referred to in paragraph 12, as well as the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, the Convention on Long-range Transboundary Air Pollution, the Outer Space Treaty, the Antarctic Treaty, the United Nations Human Rights Council and the Office of the High Commissioner for Human Rights, the United Nations Permanent Forum on Indigenous Issues, the Food and Agriculture Organization of the United Nations and its Committee on World Food Security for their information;

14. *Noting* that the Intergovernmental Panel on Climate Change, the purpose of which is to provide comprehensive assessments of scientific and technical evidence on issues relating to climate change and its impacts, considers, in its Fifth Assessment Report, different geoengineering options, their scientific bases and associated uncertainties, their potential impacts on human and natural systems, risks, research gaps, and the suitability of existing governance mechanisms, *requests* the Subsidiary Body on Scientific, Technical and Technological Advice to consider the Synthesis Report when it becomes available in September 2014 and report on implications for the Convention on Biological Diversity to the Conference of Parties;

15. *Also requests* the Executive Secretary, subject to the availability of financial resources, in collaboration with relevant organizations, to:

(a) Compile information reported by Parties as referred to in paragraph 9 above, and make it available through the clearing-house mechanism;

(b) Inform the national focal points of the Convention when the review procedures for the Fifth Assessment Report of the Intergovernmental Panel on Climate Change are initiated, so as to facilitate national cooperation in providing input, in particular as it relates to biodiversity considerations;

16. *Further requests* the Executive Secretary, subject to the availability of financial resources and at the appropriate time, to prepare, provide for peer review, and submit for consideration by a future meeting of the Subsidiary Body on Scientific, Technical and Technological Advice:

(a) An update on the potential impacts of geoengineering techniques on biodiversity, and on the regulatory framework of climate-related geoengineering relevant to the Convention on Biological Diversity, drawing upon all relevant scientific reports such as the Fifth Assessment Report of the Intergovernmental Panel on Climate Change and discussions under the Environment Management Group;

(b) An overview of the further views of Parties, other governments, indigenous and local communities and other stakeholders on the potential impacts of geoengineering on biodiversity, and associated social, economic and cultural impacts, taking into account gender considerations, and building on the overview of the views and experiences of indigenous and local communities contained in document UNEP/CBD/SBSTTA/16/INF/30.

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Agenda item 10

DECISION ADOPTED BY THE CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY

XIII/4. Biodiversity and climate change

The Conference of the Parties,

Reaffirming paragraph 8 of decision X/33,

Recognizing that cooperation among the biodiversity, climate change adaptation, mitigation and disaster reduction communities results in a greater ability to design interventions that deliver multiple benefits,

Also recognizing the potential for synergies provided by the 2030 Agenda for Sustainable Development,[1] the Sendai Framework for Disaster Risk Reduction 2015-2030,[2] the Strategic Plan for Biodiversity 2011-2020 and the Paris Agreement,[3]

Further recognizing the need for the full and effective participation of indigenous peoples and local communities including through prior informed consent, and the need to pay particular attention to their differentiated needs in order to avoid detrimental impacts on their livelihoods and cultures,

Recognizing that gender-responsive approaches and engagement of the youth are critical to ensure the success and sustainability of climate change adaptation, mitigation and disaster risk reduction policies, programmes and projects,

Also recognizing the need for improved scientific information concerning the climate change adaptation of the protected areas networks, their functionality and connectivity,

[1] General Assembly resolution 70/1, annex.

[2] General Assembly resolution 69/283, annex II.

[3] Adopted under the United Nations Framework Convention on Climate Change (United Nations, Treaty Series, Registration No. I-54113.

Noting resolution XII.11 of the Conference of the Contracting Parties to the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) at its twelfth session, entitled "Peatlands, climate change and wise use: Implications for the Ramsar Convention", which highlights the role of peatlands in climate change not only in adaptation but also in mitigation,[4]

Taking note of the following reports and the summary information provided in the note by the Executive Secretary on biodiversity and climate change:[5]

(a) Synthesis report on experiences with ecosystem-based approaches to climate change adaptation and disaster risk reduction;[6]

(b) Managing ecosystems in the context of climate change mitigation: A review of current knowledge and recommendations to support ecosystem-based mitigation actions that look beyond terrestrial forests;[7]

(c) Relationships between the Aichi Targets and land-based climate mitigation;[8]

(d) Guidance on enhancing positive and minimizing negative impacts on biodiversity of climate change adaptation activities;[9]

(e) Voluntary guidelines to support the integration of genetic diversity into national climate change adaptation planning;[10]

1. *Welcomes* the Paris Agreement,[3] in particular the articles related to biodiversity;[11]

2. *Encourages* Parties and other Governments, when developing their Nationally Determined Contributions and, where appropriate, implementing associated domestic measures, to fully take into account the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity, and to integrate ecosystem-based approaches, involving the national focal points to the Convention on Biological Diversity in this work and ensuring that information and tools and guidance developed under the Convention on Biological Diversity are used, as appropriate;

3. *Recognizes* that ecosystem-based approaches can be technically feasible, politically desirable, socially acceptable, economically viable and beneficial and that implementation and investment into these approaches are, in general, increasing at the international and national levels;

4. *Encourages* Parties, other Governments and relevant organizations to integrate ecosystem-based approaches to climate change adaptation and mitigation, and disaster risk reduction, into their strategic planning across sectors;

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[4] See http://www.ramsar.org/sites/default/files/documents/library/cop12_res11_peatlands_e.pdf.

[5] UNEP/CBD/SBSTTA/20/10.

[6] UNEP/CBD/SBSTTA/20/INF/2.

[7] UNEP/CBD/SBSTTA/20/INF/3.

[8] UNEP/CBD/SBSTTA/20/INF/29.

[9] UNEP/CBD/SBSTTA/20/INF/1.

[10] UNEP/CBD/SBSTTA/20/INF/4.

[11] The reference to the importance of ensuring the integrity of all ecosystems as contained in the preamble of the Paris Agreement; Article 5, which calls upon Parties to take action to conserve and enhance sinks and reservoirs of greenhouse gases; Article 7, which recognizes the role of adaptation in protecting livelihoods and ecosystems; Article 8 relating to loss and damage, including resilience of livelihoods, communities and ecosystems.

5. *Emphasizes* the importance of marine protected areas, inland waters protected areas, coastal resource management and marine spatial planning in protecting and building the resilience of marine and coastal ecosystems, communities and infrastructure against the impacts of climate change;

6. *Takes note* of policy approaches and positive incentives for activities relating to reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries, as well as alternative policy approaches, such as joint mitigation and adaptation approaches for the integral and sustainable management of forests, and the potential role of these approaches in the conservation of biological diversity and disaster risk reduction;

7. *Also takes note* of the potential for synergies between climate change adaptation and mitigation measures in the conservation of biological diversity and disaster risk reduction in all ecosystems;

8. *Encourages* Parties, other Governments and relevant organizations:

(a) To address the degradation of, loss of, and impacts on biodiversity and, where appropriate, related social, environmental and economic impacts associated with climate change and disasters, considering the costs of inaction, and the value of investing in actions in a timely manner in order to reduce biodiversity loss and other negative impacts;

(b) To take into consideration the status of biodiversity and its vulnerability to current and future climate change impacts when planning and implementing ecosystem-based approaches to climate change adaptation, mitigation and disaster risk reduction activities, and to minimize and, where possible, avoid activities that may increase the vulnerability and reduce the resilience of biodiversity and ecosystems;

(c) To consider, in the development and implementation of ecosystem-based approaches to climate change adaptation and mitigation, and disaster risk reduction, potential multiple benefits and trade-offs;

(d) To develop and implement education and training curricula and awareness-raising programmes for the general public on the importance of the ecosystem functions and services provided by biodiversity for climate change adaptation, mitigation and disaster risk reduction;

(e) To raise awareness, particularly among decision makers in relevant sectors and at different levels of government, about ecosystem-based approaches to climate change adaptation, mitigation and disaster risk reduction;

(f) To recognize the role of protected areas and other effective area-based conservation measures as cost-effective instruments for climate change adaptation and mitigation as well as disaster risk reduction, and that increased investment for management and conservation will have positive economic, social and environmental effects;

(g) To develop and implement ecosystem-based approaches to climate change adaptation, mitigation and disaster risk reduction that are based on available science and take into account the traditional knowledge and practices of indigenous peoples and local communities;

(h) To promote the wide use of ecosystem-based approaches where appropriate, including in marine and coastal and urban areas, in oases systems, and in agricultural landscapes;

(i) To systematically assemble and analyse evidence to assess the effectiveness of ecosystem-based approaches to climate change adaptation and mitigation, and disaster risk reduction, including through development of improved monitoring and evaluation methods, noting that such methods are best developed and applied early in the planning phase;

(j) To make use of existing tools and guidance on ecosystem-based approaches to climate change adaptation, mitigation and disaster risk reduction and, where appropriate, to further develop and refine these tools and guidance;

(k) To ensure that ecosystem-based approaches to climate change adaptation, mitigation and disaster risk reduction activities maximize co-benefits to people and biodiversity;

(l) To promote platforms, such as those established under the United Nations Framework Convention on Climate Change, for the exchange of experiences and sharing of best practices, including those of indigenous peoples and local communities on ecosystem-based approaches to climate change adaptation and mitigation, and disaster risk reduction, in a holistic and integrated manner;

(m) To promote the integration of climate change adaptation best practices, strategies and methodologies into conservation planning frameworks, in consideration of species and ecosystems responses, and vulnerability to past and future anthropogenic climate change;

(n) To share and disseminate knowledge and experiences on matters referred to in the present paragraph through, inter alia, the clearing-house mechanism;

9. *Recalls* paragraph 5 of decision IX/16, in which it encouraged Parties, other Governments, donors and relevant organizations to provide financial and technical support to capacity-building activities, including through raising public awareness, so as to enable developing countries, especially least developed countries, small island developing States and countries with economies in transition, to implement activities related to the impacts of climate change, and of the positive and negative impacts of climate change mitigation and adaptation activities on biodiversity;

10. *Requests* the Executive Secretary to prepare, subject to the availability of resources, in collaboration with relevant organizations, in particular the United Nations Framework Convention on Climate Change and the United Nations Office for Disaster Risk Reduction, voluntary guidelines for the design and effective implementation of ecosystem-based approaches to climate change adaptation and disaster risk reduction, for consideration by the Subsidiary Body on Scientific Technical and Technological Advice prior to the fourteenth meeting of the Conference of the Parties;

11. *Also requests* the Executive Secretary to ensure that the voluntary guidelines consider existing guidance, including that developed under the Convention on Biological Diversity, the United Nations Convention to Combat Desertification and the United Nations Framework Convention on Climate Change, and include information on:

(a) Tools for assessing the effectiveness of ecosystem-based approaches to climate change adaptation and disaster risk reduction while safeguarding biodiversity at various scales;

(b) The design and implementation of ecosystem-based approaches to climate change adaptation and disaster risk reduction at different scales, including at the subnational and local levels;

(c) Trade-offs in the provision of various ecosystem services and limits to ecosystem-based approaches for climate change adaptation and disaster risk reduction;

(d) Tools and indicators for monitoring the effectiveness of ecosystem-based approaches to climate change adaptation and disaster risk reduction;

(e) Options for integrating alternative policy approaches into ecosystem-based approaches to climate change adaptation and disaster risk reduction;

(f) Integrating knowledge, technologies, practices and efforts of indigenous peoples and local communities related to addressing and responding to climate change and impacts on the biodiversity;

(g) Methods making use of ecosystem-based approaches to climate change adaptation and disaster risk reduction in combination with hard infrastructure;

12. *Further requests* the Executive Secretary to further promote synergies with the Secretariat of the United Nations Framework Convention on Climate Change, the Sendai Framework for Disaster Risk Reduction 2015-2030[2] and the 2030 Agenda for Sustainable Development,[1] ensuring that this includes increasing knowledge and sharing of information, guidance and tools developed under the Convention on Biological Diversity relating to the impacts of climate change on biological diversity and the role of ecosystems for climate change adaptation, mitigation and disaster risk reduction, with a view to identifying possible solutions;

13. *Requests* the Executive Secretary to further enhance synergies between the work of the Convention on ecosystem restoration, ecosystem-based approaches to climate change adaptation and mitigation and the work on land degradation neutrality and sustainable land management under the United Nations Convention to Combat Desertification and ensure coherence with relevant approaches under other United Nations bodies.

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UN environment programme

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Fifteenth meeting (part I)
Kunming, China, 11-15 October 2021
and 25 April to 8 May 2022

KUNMING DECLARATION
"ECOLOGICAL CIVILIZATION: BUILDING A SHARED FUTURE FOR ALL LIFE ON EARTH"

The Executive Secretary is pleased to transmit to the Conference of the Parties the Kunming Declaration: Ecological civilization: building a shared future for all life on Earth, which was adopted by ministers at the high-level segment on 13 October 2021.

Kunming Declaration

Declaration from the High-Level Segment of the UN Biodiversity Conference 2020 (Part 1) under the theme:

"Ecological Civilization: Building a Shared Future for All Life on Earth"

We, the Ministers and other heads of delegations, having met in Kunming, Yunnan Province, People's Republic of China, in person, and remotely, on 12 and 13 October 2021, on the occasion of the United Nations Biodiversity Conference,[1] at the invitation of the Government of the People's Republic of China,

Recalling the relevance of the 2050 Vision for Biodiversity: "Living in harmony with nature",[2]

Recalling the 2030 Agenda for Sustainable Development[3] and *recognizing* that its full achievement across the environmental, social and economic dimensions is necessary to enable the realization of the objectives of the Convention on Biological Diversity and the 2050 Vision for Biodiversity;

Emphasizing that biodiversity, and the ecosystem functions and services it provides, support all forms of life on Earth and underpin our human and planetary health and well-being, economic growth and sustainable development,

Concerned that the ongoing loss of biodiversity jeopardizes achievement of the Sustainable Development Goals and other international goals and targets,

Recognizing that progress has been made in the last decade, under the 2011-2020 Strategic Plan for Biodiversity,[4] but deeply concerned that such progress has been insufficient to achieve the Aichi Biodiversity Targets,

Acknowledging with grave concern that the unprecedented and interrelated crises of biodiversity loss, climate change, land degradation and desertification, ocean degradation, and pollution, and increasing risks to human health and food security, pose an existential threat to our society, our culture, our prosperity and our planet,

Recognizing that these crises share many underlying drivers of change,

Recognizing also that the main direct drivers of biodiversity loss are land/sea use change, overexploitation, climate change, pollution and invasive alien species,

Acknowledging that indigenous peoples and local communities contribute to the conservation and sustainable use of biodiversity through the application of traditional knowledge, innovations and practices, and through their stewardship of biodiversity on their traditional lands and territories,

Recognizing also the important roles played by women and girls, and youth,

Stressing, therefore, that urgent and integrated action is needed, for transformative change, across all sectors of the economy and all parts of society, through policy coherence at all levels of government, and the realization of synergies at the national level across relevant Conventions and multilateral organizations, to shape a future path for nature and people, where biodiversity is conserved and used sustainably, and the benefits arising from the utilization of genetic resources are shared fairly and equitably, as an integral part of sustainable development,

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[1] Comprising: the fifteenth meeting of the Conference of the Parties, the tenth meeting of the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety, and the fourth meeting of the Parties to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization.

[2] Conference of the Parties, decision X/2, annex.

[3] General Assembly resolution 70/1, entitled "Transforming our world: the 2030 Agenda for Sustainable Development".

[4] Conference of the Parties, decision X/2.

Noting that a combination of measures is needed to halt and reverse the loss of biodiversity, including actions to address land and sea use change, enhance the conservation and restoration of ecosystems, mitigate climate change, reduce pollution, control invasive alien species and prevent overexploitation, as well as actions to transform economic and financial systems and to ensure sustainable production and consumption, and reduce waste, recognizing that none of these measures alone, nor in partial combinations, is sufficient and that the effectiveness of each measure is enhanced by the other,

Noting the call of many countries to protect and conserve 30 per cent of land and sea areas through well-connected systems of protected areas and other effective area-based conservation measures by 2030,

Reaffirming the Cancun Declaration on Mainstreaming the Conservation and Sustainable Use of Biodiversity for Well-Being and the Sharm el Sheikh Declaration on Investing in Biodiversity for People and Planet,[5]

Recalling the United Nations Summit on Biodiversity, held in September 2020, with the theme "Urgent action on Biodiversity for Sustainable Development",

Taking note of the theme of the United Nations Biodiversity Conference 2020: "Ecological Civilization: Building a Shared Future for All Life on Earth",

We declare that putting biodiversity on a path to recovery is a defining challenge of this decade, in the context of the United Nations Decade of Action for Sustainable Development, the United Nations Decade on Ecosystem Restoration[6] and the United Nations Decade for Ocean Science for Sustainable Development,[7] requiring strong political momentum to develop, adopt and implement an ambitious and transformative post-2020 global biodiversity framework that promotes the three objectives of the Convention in a balanced manner,

We commit to:

1. Ensure the development, adoption and implementation of an effective post-2020 global biodiversity framework, that includes provision of the necessary means of implementation, in line with the Convention, and appropriate mechanisms for monitoring, reporting and review, to reverse the current loss of biodiversity and ensure that biodiversity is put on a path to recovery by 2030 at the latest, towards the full realization of the 2050 Vision of "Living in Harmony with Nature";

2. Support, as appropriate, the development, adoption and implementation of an effective post-2020 Implementation Plan, and Capacity-building Action Plan, for the Cartagena Protocol on Biosafety;

3. Work across our respective Governments to continue to promote the integration, or "mainstreaming" of the conservation and sustainable use of biodiversity into decision-making including through the integration of the multiple values of biodiversity into policies, regulations, planning processes, poverty reduction strategies and economic accounting, and strengthen cross-sectoral coordinating mechanisms on biodiversity;

4. Accelerate and strengthen the development and update of the national biodiversity strategies and action plans, to ensure the effective implementation of the post 2020 global biodiversity framework at the national level;

5. Improve the effectiveness, and increase the coverage, globally, of area-based conservation and management by enhancing and establishing effective systems of protected areas and adopting other effective area-based conservation measures, as well as spatial planning tools, to protect species and

[5] UNEP/CBD/COP/13/24.

[6] General Assembly resolution 73/284.

[7] General Assembly resolution 72/73.

genetic diversity and reduce or eliminate threats to biodiversity, recognizing the rights of indigenous peoples and local communities and ensuring their full and effective participation;

6. Strengthen the sustainable use of biodiversity in order to meet the needs of people;

7. Actively enhance the global environmental legal framework and strengthen environmental law at the national level, and its enforcement, to protect biodiversity and to combat its illegal use, and to respect, protect and promote human rights obligations when taking actions to protect biodiversity;

8. Step up our efforts to ensure, through the Convention, the Nagoya Protocol and other agreements as appropriate, the fair and equitable sharing of benefits arising out of the utilization of genetic resources, including traditional knowledge associated with genetic resources, taking into account the context of digital sequence information on genetic resources;

9. Strengthen measures, and their implementation, for the development, assessment, regulation, management, and transfer, as appropriate, of relevant biotechnologies, with a view to promoting the benefits and to reducing the risks, including those associated with the use and release of living modified organisms which are likely to have adverse environmental impacts;

10. Increase the application of ecosystem-based approaches to address biodiversity loss, restore degraded ecosystems, boost resilience, mitigate and adapt to climate change, support sustainable food production, promote health, and contribute to addressing other challenges, enhancing One Health and other holistic approaches and ensuring benefits across economic, social, and environmental dimensions of sustainable development, through robust safeguards for environmental and social protection, highlighting that such ecosystem-based approaches do not replace the priority actions needed to urgently reduce greenhouse gas emissions in a way that is consistent with the goals of the Paris Agreement;[8,9]

11. Step up actions to reduce the negative effects of human activities on the ocean to protect marine and coastal biodiversity and strengthen the resilience of marine and coastal ecosystems to climate change;

12. Ensure that post-pandemic recovery policies, programmes and plans contribute to the conservation and sustainable use of biodiversity, promoting sustainable and inclusive development;

13. Work with ministries of finance and economy, and other relevant ministries, to reform incentive structures, eliminating, phasing out or reforming subsidies and other incentives that are harmful to biodiversity, while protecting people in vulnerable situations, to mobilize additional financial resources from all sources, and align all financial flows in support of the conservation and sustainable use of biodiversity;

14. Increase the provision of financial, technological and capacity building support to developing countries necessary to implement the post 2020 global biodiversity framework and in line with the provisions of the Convention;

15. Enable the full and effective participation of indigenous peoples and local communities, women, youth, civil society, local governments and authorities, academia, the business and financial sectors, and other relevant stakeholders, and encourage them to make voluntary commitments in the context of the Sharm El Sheikh to Kunming Action Agenda for Nature and People, and to continue to build the momentum for the implementation of the post 2020 global biodiversity framework;

16. Further develop communication, education and public awareness tools on biodiversity to support changes in behaviour towards the conservation and sustainable use of biodiversity;

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[8] United Nations, *Treaty Series*, No. I-54113.

[9] Ecosystem-based approaches may also be referred to as "Nature based solutions" as per SBSTTA recommendation 23/2, paragraph 4".

17. Further enhance collaboration and coordinate actions with ongoing multilateral environmental agreements, such as the United Nations Framework Convention on Climate Change,[10] the United Nations Convention to Combat Desertification,[11] and the biodiversity-related conventions, as well as the 2030 Agenda for Sustainable Development and other related international and multilateral processes, to promote the protection, conservation, sustainable management and restoration of terrestrial, freshwater and marine biodiversity, while contributing to other sustainable development goals, aligned with the 2030 Agenda for Sustainable Development.

Adopted, 13 October, 2021, Kunming, China.

This Declaration will be submitted to the General Assembly of the United Nations, the 2022 High-Level Political Forum on Sustainable Development, and the United Nations Environment Assembly at the second part of its fifth session.

[10] United Nations, *Treaty Series*, vol. 1771, No. 30822.

[11] Ibid., vol. 1954, No. 33480.

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Agenda item 9A

DECISION ADOPTED BY THE CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY

15/4. Kunming-Montreal Global Biodiversity Framework

The Conference of the Parties,

Recalling its decision 14/34, in which it adopted the preparatory process for the development of the post-2020 global biodiversity framework and decided to establish an open-ended intersessional working group to support its preparation,

Noting the outcomes of the first, second, third, fourth and fifth meeting of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework, of the regional and thematic consultations and workshops conducted based on decision 14/34 and of the intersessional work conducted on digital sequence information on genetic resources,[1]

Noting also the outcomes of the eleventh meeting of the Ad Hoc Open-ended Working Group on Article 8(j) and Related Provisions, of the twenty-third and twenty-fourth meetings of the Subsidiary Body on Scientific, Technical and Technological Advice and of the third meeting of the Subsidiary Body on Implementation,[2]

Expressing its gratitude to the following Governments and organizations for hosting these consultations, as well as for their financial contributions: Australia, Austria, Belgium, Brazil, Canada, Czechia, Kenya, European Union, Finland, France, Germany, Ireland, Italy, Japan, Malta, Monaco, Netherlands, New Zealand, Norway, Poland, Republic of Korea, Serbia, Slovakia, South Africa, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland, and Uruguay, as well as the African Union, the Food and Agriculture Organization of the United Nations, the United Nations Environment Programme, the United Nations Development Programme and Tourism Montreal

Expressing its gratitude to the Co-Chairs of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework, Mr. Basile van Havre (Canada) and Mr. Francis Ogwal (Uganda), for supporting the development of the Kunming-Montreal Global Biodiversity Framework,

Welcoming the submissions by Parties, other Governments, indigenous peoples and local communities, United Nations organizations and programmes, other multilateral environmental agreements,

[1] https://www.cbd.int/conferences/post2020

[2] CBD/WG8J/11/7, CBD/SBSTTA/23/9, CBD/SBSTTA/24/12 and CBD/SBI/3/21, respectively.

subnational governments, cities and other local authorities, intergovernmental organizations, non-governmental organizations, women's groups, youth groups, the business and finance community, the scientific community, academia, faith-based organizations, representatives of sectors related to or dependent on biodiversity, citizens at large, and other stakeholders and observers providing views on the development of the post-2020 global biodiversity framework,

Alarmed by the continued loss of biodiversity and the threat that this poses to nature and human well-being,

Emphasizing therefore the need for a balanced and enhanced implementation of all provisions of the Convention, including its three objectives,

1. *Adopts* the Kunming-Montreal Global Biodiversity Framework, as contained in the annex to the present decision;

2. *Notes* that the implementation of the Kunming-Montreal Global Biodiversity Framework will be supported by the following decisions adopted by the Conference of the Parties at its fifteenth meeting and affirms that these decisions are of equal standing to the Kunming-Montreal Global Biodiversity Framework;

(a) Decision 15/5 on the monitoring framework for the Kunming-Montreal Global Biodiversity Framework;

(b) Decision 15/6 on planning, monitoring, reporting and review;

(c) Decision 15/7 on resource mobilization;

(d) Decision 15/8 on capacity-building and development and technical and scientific cooperation;

(e) Decision 15/9 on digital sequence information on genetic resources;

(f) Decision 15/13 on cooperation with other Conventions and international organizations.

3. *Also notes* that the implementation of the Kunming-Montreal Global Biodiversity Framework will be supported by relevant decisions adopted by the Conference of the Parties serving as the meeting of the Parties to the Protocols, in particular the Implementation Plan for the Cartagena Protocol on Biosafety and the Capacity-building Action Plan for the Cartagena Protocol on Biosafety;[3]

4. *Urges* Parties and other Governments, with the support of intergovernmental and other organizations, as appropriate, to implement the Kunming-Montreal Global Biodiversity Framework, and, in particular, to enable participation at all levels of government, with a view to fostering the full and effective contributions of women, youth, indigenous peoples and local communities, civil society organizations, the private and financial sectors, and stakeholders from all other sectors, to that end;

5. *Invites* Parties and other Governments to cooperate at the transboundary, regional and international levels in implementing the Kunming-Montreal Global Biodiversity Framework;

6. *Reaffirms* its expectation that Parties and other Governments will ensure that the rights of indigenous peoples and local communities are respected and given effect to in the implementation of the Kunming-Montreal Global Biodiversity Framework;

7. *Invites* the General Assembly of the United Nations to acknowledge the Kunming-Montreal Global Biodiversity Framework and to take into account the progress in its implementation when monitoring progress towards the Sustainable Development Goals;

8. *Decides* that the Kunming-Montreal Global Biodiversity Framework should be used as a strategic plan for the implementation of the Convention and its Protocols, its bodies and its Secretariat over

[3] Decisions CP-10/3 and CP-10/4.

the period 2022–2030 and that, in this regard, the Framework should be used to better align and direct the work of the various bodies of the Convention and its Protocols, its Secretariat and its budget according to the goals and targets of the Framework;

9. *Requests* the Executive Secretary to conduct a strategic review and analysis of the programmes of work of the Convention in the context of the Kunming-Montreal Global Biodiversity Framework to facilitate its implementation, and, on the basis of this analysis, to prepare draft updates of these programmes of work for consideration by the Subsidiary Body on Scientific, Technical and Technological Advice and by the Subsidiary Body on Implementation, as appropriate, at meetings during the period between the fifteenth and sixteenth meetings of the Conference of the Parties, and to report on this work to the Conference of the Parties at its sixteenth meeting.

Annex

Kunming-Montreal Global Biodiversity Framework

Section A. Background

1. Biodiversity is fundamental to human well-being, a healthy planet, and economic prosperity for all people, including for living well in balance and in harmony with Mother Earth. We depend on it for food, medicine, energy, clean air and water, security from natural disasters as well as recreation and cultural inspiration, and it supports all systems of life on Earth.

2. The Kunming-Montreal Global Biodiversity Framework seeks to respond to the *Global Assessment Report of Biodiversity and Ecosystem Services* issued by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES),[4] the fifth edition of the *Global Biodiversity Outlook*,[5] and many other scientific documents that provide ample evidence that, despite ongoing efforts, biodiversity is deteriorating worldwide at rates unprecedented in human history. As the IPBES global assessment report states:[6]

> An average of around 25 per cent of species in assessed animal and plant groups are threatened, suggesting that around 1 million species already face extinction, many within decades, unless action is taken to reduce the intensity of drivers of biodiversity loss. Without such action, there will be a further acceleration in the global rate of species extinction, which is already at least tens to hundreds of times higher than it has averaged over the past 10 million years.
>
> The biosphere, upon which humanity as a whole depends, is being altered to an unparalleled degree across all spatial scales. Biodiversity – the diversity within species, between species and of ecosystems – is declining faster than at any time in human history.
>
> Nature can be conserved, restored and used sustainably while other global societal goals are simultaneously met through urgent and concerted efforts fostering transformative change.
>
> The direct drivers of change in nature with the largest global impact have been (starting with those with the most impact) changes in land and sea use, direct exploitation of organisms, climate change, pollution and invasion of alien species. Those five direct drivers result from an array of underlying causes, the indirect drivers of change, which are, in turn, underpinned by social values and behaviours (…)The rate of change in the direct and indirect drivers differs among regions and countries.

3. The Kunming-Montreal Global Biodiversity Framework, building on the Strategic Plan for Biodiversity 2011–2020, its achievements, gaps, and lessons learned, and the experience and achievements of other relevant multilateral environmental agreements, sets out an ambitious plan to implement broad-based action to bring about a transformation in our societies' relationship with biodiversity by 2030, in line with the 2030 Agenda for Sustainable Development and its Sustainable Development Goals, and ensure that, by 2050, the shared vision of living in harmony with nature is fulfilled.

Section B. Purpose

4. The Kunming-Montreal Global Biodiversity Framework aims to catalyze, enable and galvanize urgent and transformative action by Governments, and subnational and local authorities, with the

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[4] IPBES (2019): *Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. IPBES secretariat, Bonn, Germany.

[5] Secretariat of the Convention on Biological Diversity (2020). Global Biodiversity Outlook 5. Montreal.

[6] IPBES (2019): The following paragraphs are taken from key messages A6, A, D and B respectively, of the *Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. IPBES secretariat, Bonn, Germany.

involvement of all of society, to halt and reverse biodiversity loss, to achieve the outcomes it sets out in its Vision, Mission, Goals and Targets, and thereby contribute to the three objectives of the Convention on Biological Diversity and to those of its Protocols. Its purpose is the full implementation of the three objectives of the Convention in a balanced manner.

5. The Framework is action- and results-oriented and aims to guide and promote, at all levels, the revision, development, updating, and implementation of policies, goals, targets, and national biodiversity strategies and actions plans, and to facilitate the monitoring and review of progress at all levels in a more transparent and responsible manner.

6. The Framework promotes coherence, complementarity and cooperation between the Convention on Biological Diversity and its Protocols, other biodiversity related conventions, and other relevant multilateral agreements and international institutions, respecting their mandates, and creates opportunities for cooperation and partnerships among diverse actors to enhance implementation of the Framework.

Section C. Considerations for the implementation of the Kunming-Montreal Global Biodiversity Framework

7. The Kunming-Montreal Global Biodiversity Framework, including its Vision, Mission, Goals and Targets, is to be understood, acted upon, implemented, reported and evaluated, consistent with the following:

Contribution and rights of indigenous peoples and local communities

(a) The Framework acknowledges the important roles and contributions of indigenous peoples and local communities as custodians of biodiversity and as partners in its conservation, restoration and sustainable use. The Framework's implementation must ensure that the rights, knowledge, including traditional knowledge associated with biodiversity, innovations, worldviews, values and practices of indigenous peoples and local communities are respected, and documented and preserved with their free, prior and informed consent,[7] including through their full and effective participation in decision-making, in accordance with relevant national legislation, international instruments, including the United Nations Declaration on the Rights of Indigenous Peoples,[8] and human rights law. In this regard, nothing in this framework may be construed as diminishing or extinguishing the rights that indigenous peoples currently have or may acquire in the future;

Different value systems

(b) Nature embodies different concepts for different people, including biodiversity, ecosystems, Mother Earth, and systems of life. Nature's contributions to people also embody different concepts, such as ecosystem goods and services and nature's gifts. Both nature and nature's contributions to people are vital for human existence and good quality of life, including human well-being, living in harmony with nature, and living well in balance and harmony with Mother Earth. The Framework recognizes and considers these diverse value systems and concepts, including, for those countries that recognize them, rights of nature and rights of Mother Earth, as being an integral part of its successful implementation;

Whole-of-government and whole-of-society approach

(c) This is a framework for all - for the whole of government and the whole of society. Its success requires political will and recognition at the highest level of government and relies on action and cooperation by all levels of government and by all actors of society;

[7] In this framework, free, prior and informed consent refers to the tripartite terminology of "prior and informed consent" or "free, prior and informed consent" or "approval and involvement".

[8] A/RES/61/295.

National circumstances, priorities and capabilities

(d) The goals and targets of the Framework are global in nature. Each Party would contribute to attaining the goals and targets of the Framework in accordance with national circumstances, priorities and capabilities;

Collective effort towards the targets

(e) The Parties will catalyse implementation of the Framework through mobilization of broad public support at all levels;

Right to development

(f) Recognizing the 1986 United Nations Declaration on the Right to Development,[9] the Framework enables responsible and sustainable socioeconomic development that, at the same time, contributes to the conservation and sustainable use of biodiversity;

Human rights-based approach

(g) The implementation of the Framework should follow a human rights-based approach, respecting, protecting, promoting and fulfilling human rights. The Framework acknowledges the human right to a clean, healthy and sustainable environment;[10]

Gender

(h) Successful implementation of the Framework will depend on ensuring gender equality and empowerment of women and girls, and on reducing inequalities;

Fulfilment of the three objectives of the Convention and its Protocols and their balanced implementation

(i) The goals and targets of the Framework are integrated and are intended to contribute in a balanced manner to the three objectives of the Convention on Biological Diversity. The Framework is to be implemented in accordance with these objectives, with the provisions of the Convention on Biological Diversity, and with the Cartagena Protocol on Biosafety and the Nagoya Protocol on Access and Benefit-sharing, as applicable;

Consistency with international agreements or instruments

(j) The Framework needs to be implemented in accordance with relevant international obligations. Nothing in this Framework should be interpreted as agreement to modify the rights and obligations of a Party under the Convention or any other international agreement;

Principles of the Rio Declaration

(k) The Framework recognizes that reversing the loss of biological diversity, for the benefit of all living beings, is a common concern of humankind. Its implementation should be guided by the principles of the Rio Declaration on Environment and Development;[11]

Science and innovation

(l) The implementation of the Framework should be based on scientific evidence and traditional knowledge and practices, recognizing the role of science, technology and innovation;

[9] A/RES/41/128.

[10] UN General Assembly Resolution 76/300 of 28 July 2022.

[11] Rio Declaration on Environment and Development (A/CONF.151/26/Rev.l (vol.I)), United Nations publication, Sales No. E.93.1.8.

Ecosystem approach

(m) This Framework is to be implemented based on the ecosystem approach of the Convention;[12]

Intergenerational equity

(n) The implementation of the Framework should be guided by the principle of intergenerational equity which aims to meet the needs of the present without compromising the ability of future generations to meet their own needs and to ensure meaningful participation of younger generations in decision-making processes at all levels;

Formal and informal education

(o) Implementation of the Framework requires transformative, innovative and transdisciplinary education, formal and informal, at all levels, including science-policy interface studies and lifelong learning processes, recognizing diverse world views, values and knowledge systems of indigenous peoples and local communities;

Access to financial resources

(p) The full implementation of the Framework requires adequate, predictable and easily accessible financial resources;

Cooperation and synergies

(q) Enhanced collaboration, cooperation and synergies between the Convention on Biological Diversity and its Protocols, other biodiversity-related conventions, other relevant multilateral agreements and international organizations and processes, in line with their respective mandates, including at the global, regional, subregional and national levels, would contribute to and promote the implementation of the Framework in a more efficient and effective manner;

Biodiversity and health

(r) The Framework acknowledges the interlinkages between biodiversity and health and the three objectives of the Convention. The Framework is to be implemented with consideration of the One Health Approach, among other holistic approaches that are based on science, mobilize multiple sectors, disciplines and communities to work together, and aim to sustainably balance and optimize the health of people, animals, plants and ecosystems, recognizing the need for equitable access to tools and technologies including medicines, vaccines and other health products related to biodiversity, while highlighting the urgent need to reduce pressures on biodiversity and decrease environmental degradation to reduce risks to health, and, as appropriate, develop practical access and benefit-sharing arrangements.

Section D. Relationship with the 2030 Agenda for Sustainable Development

8. The Kunming-Montreal Global Biodiversity Framework is a contribution to the achievement of the 2030 Agenda for Sustainable Development. At the same time, progress towards the Sustainable Development Goals and the achievement of sustainable development in all its three dimensions (environmental, social and economic) is necessary to create the conditions necessary to fulfil the goals and targets of the Framework. It will place biodiversity, its conservation, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, at the heart of the sustainable development agenda, recognizing the important linkages between biological and cultural diversity.

[12] Decision V/6.

Section E. Theory of change

9. The Kunming-Montreal Global Biodiversity Framework is built around a theory of change which recognizes that urgent policy action is required globally, regionally and nationally to achieve sustainable development so that the drivers of undesirable change that have exacerbated biodiversity loss will be reduced and/or reversed to allow for the recovery of all ecosystems and to achieve the Convention's Vision of living in harmony with nature by 2050.

Section F. 2050 vision and 2030 mission

10. The vision of the Kunming-Montreal Global Biodiversity Framework is a world of living in harmony with nature where "by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people."

11. The mission of the Framework for the period up to 2030, towards the 2050 vision is:

> To take urgent action to halt and reverse biodiversity loss to put nature on a path to recovery for the benefit of people and planet by conserving and sustainably using biodiversity and by ensuring the fair and equitable sharing of benefits from the use of genetic resources, while providing the necessary means of implementation.

Section G. Global goals for 2050

12. The Kunming-Montreal Global Biodiversity Framework has four long-term goals for 2050 related to the 2050 Vision for biodiversity.

GOAL A

The integrity, connectivity and resilience of all ecosystems are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050;

Human induced extinction of known threatened species is halted, and, by 2050, the extinction rate and risk of all species are reduced tenfold and the abundance of native wild species is increased to healthy and resilient levels;

The genetic diversity within populations of wild and domesticated species, is maintained, safeguarding their adaptive potential.

GOAL B

Biodiversity is sustainably used and managed and nature's contributions to people, including ecosystem functions and services, are valued, maintained and enhanced, with those currently in decline being restored, supporting the achievement of sustainable development for the benefit of present and future generations by 2050.

GOAL C

The monetary and non-monetary benefits from the utilization of genetic resources and digital sequence information on genetic resources, and of traditional knowledge associated with genetic resources, as applicable, are shared fairly and equitably, including, as appropriate with indigenous peoples and local communities, and substantially increased by 2050, while ensuring traditional knowledge associated with genetic resources is appropriately protected, thereby contributing to the conservation and sustainable use of biodiversity, in accordance with internationally agreed access and benefit-sharing instruments.

GOAL D

Adequate means of implementation, including financial resources, capacity-building, technical and scientific cooperation, and access to and transfer of technology to fully implement the Kunming-Montreal Global Biodiversity Framework are secured and equitably accessible to all Parties, especially developing country Parties, in particular the least developed countries and small island developing States, as well as countries with economies in transition, progressively closing the biodiversity finance gap of $700 billion per year, and aligning financial flows with the Kunming-Montreal Global Biodiversity Framework and the 2050 Vision for biodiversity.

Section H. Global targets for 2030

13. The Kunming-Montreal Global Biodiversity Framework has 23 action-oriented global targets for urgent action over the decade to 2030. The actions set out in each target need to be initiated immediately and completed by 2030. Together, the results will enable achievement towards the outcome-oriented goals for 2050. Actions to reach these targets should be implemented consistently and in harmony with the Convention on Biological Diversity and its Protocols, and other relevant international obligations, taking into account national circumstances, priorities and socioeconomic conditions.

1. Reducing threats to biodiversity

TARGET 1

Ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes addressing land- and sea-use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities.

TARGET 2

Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.

TARGET 3

Ensure and enable that by 2030 at least 30 per cent of terrestrial and inland water areas, and of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories.

TARGET 4

Ensure urgent management actions to halt human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk, as well as to maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex situ conservation and sustainable management practices, and effectively manage human-wildlife interactions to minimize human-wildlife conflict for coexistence.

TARGET 5

Ensure that the use, harvesting and trade of wild species is sustainable, safe and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spillover, applying the ecosystem approach, while respecting and protecting customary sustainable use by indigenous peoples and local communities.

TARGET 6

Eliminate, minimize, reduce and or mitigate the impacts of invasive alien species on biodiversity and ecosystem services by identifying and managing pathways of the introduction of alien species, preventing the introduction and establishment of priority invasive alien species, reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50 per cent by 2030, and eradicating or controlling invasive alien species, especially in priority sites, such as islands.

TARGET 7

Reduce pollution risks and the negative impact of pollution from all sources by 2030, to levels that are not harmful to biodiversity and ecosystem functions and services, considering cumulative effects, including: (a) by reducing excess nutrients lost to the environment by at least half, including through more efficient nutrient cycling and use; (b) by reducing the overall risk from pesticides and highly hazardous chemicals by at least half, including through integrated pest management, based on science, taking into account food security and livelihoods; and (c) by preventing, reducing, and working towards eliminating plastic pollution.

TARGET 8

Minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including through nature-based solution and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity.

2. Meeting people's needs through sustainable use and benefit-sharing

TARGET 9

Ensure that the management and use of wild species are sustainable, thereby providing social, economic and environmental benefits for people, especially those in vulnerable situations and those most dependent on biodiversity, including through sustainable biodiversity-based activities, products and services that enhance biodiversity, and protecting and encouraging customary sustainable use by indigenous peoples and local communities.

TARGET 10

Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches, contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services.

TARGET 11

Restore, maintain and enhance nature's contributions to people, including ecosystem functions and services, such as the regulation of air, water and climate, soil health, pollination and reduction of disease risk, as well as protection from natural hazards and disasters, through nature-based solutions and/or ecosystem-based approaches for the benefit of all people and nature.

TARGET 12

Significantly increase the area and quality, and connectivity of, access to, and benefits from green and blue spaces in urban and densely populated areas sustainably, by mainstreaming the conservation and sustainable use of biodiversity, and ensure biodiversity-inclusive urban planning, enhancing native biodiversity, ecological connectivity and integrity, and improving human health and well-being and connection to nature, and contributing to inclusive and sustainable urbanization and to the provision of ecosystem functions and services.

TARGET 13

Take effective legal, policy, administrative and capacity-building measures at all levels, as appropriate, to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources and from digital sequence information on genetic resources, as well as traditional knowledge associated with genetic resources, and facilitating appropriate access to genetic resources, and by 2030, facilitating a significant increase of the benefits shared, in accordance with applicable international access and benefit-sharing instruments.

3. Tools and solutions for implementation and mainstreaming

TARGET 14

Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting, within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, and fiscal and financial flows with the goals and targets of this framework.

TARGET 15

Take legal, administrative or policy measures to encourage and enable business, and in particular to ensure that large and transnational companies and financial institutions:

(a) Regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity, including with requirements for all large as well as transnational companies and financial institutions along their operations, supply and value chains, and portfolios;

(b) Provide information needed to consumers to promote sustainable consumption patterns;

(c) Report on compliance with access and benefit-sharing regulations and measures, as applicable;

in order to progressively reduce negative impacts on biodiversity, increase positive impacts, reduce biodiversity-related risks to business and financial institutions, and promote actions to ensure sustainable patterns of production.

TARGET 16

Ensure that people are encouraged and enabled to make sustainable consumption choices, including by establishing supportive policy, legislative or regulatory frameworks, improving education and access to relevant and accurate information and alternatives, and by 2030, reduce the global footprint of consumption in an equitable manner, including through halving global food waste, significantly reducing overconsumption and substantially reducing waste generation, in order for all people to live well in harmony with Mother Earth.

TARGET 17

Establish, strengthen capacity for, and implement in all countries, biosafety measures as set out in Article 8(g) of the Convention on Biological Diversity and measures for the handling of biotechnology and distribution of its benefits as set out in Article 19 of the Convention.

TARGET 18

Identify by 2025, and eliminate, phase out or reform incentives, including subsidies, harmful for biodiversity, in a proportionate, just, fair, effective and equitable way, while substantially and progressively reducing them by at least $500 billion per year by 2030, starting with the most harmful incentives, and scale up positive incentives for the conservation and sustainable use of biodiversity.

TARGET 19

Substantially and progressively increase the level of financial resources from all sources, in an effective, timely and easily accessible manner, including domestic, international, public and private resources, in accordance with Article 20 of the Convention, to implement national biodiversity strategies and action plans, mobilizing at least $200 billion per year by 2030, including by:

(a) Increasing total biodiversity related international financial resources from developed countries, including official development assistance, and from countries that voluntarily assume obligations of developed country Parties, to developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition, to at least $20 billion per year by 2025, and to at least $30 billion per year by 2030;

(b) Significantly increasing domestic resource mobilization, facilitated by the preparation and implementation of national biodiversity finance plans or similar instruments according to national needs, priorities and circumstances;

(c) Leveraging private finance, promoting blended finance, implementing strategies for raising new and additional resources, and encouraging the private sector to invest in biodiversity, including through impact funds and other instruments;

(d) Stimulating innovative schemes such as payment for ecosystem services, green bonds, biodiversity offsets and credits, and benefit-sharing mechanisms, with environmental and social safeguards;

(e) Optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises;

(f) Enhancing the role of collective actions, including by indigenous peoples and local communities, Mother Earth centric actions[13] and non-market-based approaches including community based natural resource management and civil society cooperation and solidarity aimed at the conservation of biodiversity;

(g) Enhancing the effectiveness, efficiency and transparency of resource provision and use;

TARGET 20

Strengthen capacity-building and development, access to and transfer of technology, and promote development of and access to innovation and technical and scientific cooperation, including through South-South, North-South and triangular cooperation, to meet the needs for effective implementation, particularly in developing countries, fostering joint technology development and joint scientific research programmes for the conservation and sustainable use of biodiversity and strengthening scientific research and monitoring capacities, commensurate with the ambition of the goals and targets of the Framework.

[13] Mother Earth Centric Actions: Ecocentric and rights-based approach enabling the implementation of actions towards harmonic and complementary relationships between peoples and nature, promoting the continuity of all living beings and their communities and ensuring the non-commodification of environmental functions of Mother Earth.

TARGET 21

Ensure that the best available data, information and knowledge are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent,[14] in accordance with national legislation.

TARGET 22

Ensure the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making, and access to justice and information related to biodiversity by indigenous peoples and local communities, respecting their cultures and their rights over lands, territories, resources, and traditional knowledge, as well as by women and girls, children and youth, and persons with disabilities and ensure the full protection of environmental human rights defenders.

TARGET 23

Ensure gender equality in the implementation of the Framework through a gender-responsive approach, where all women and girls have equal opportunity and capacity to contribute to the three objectives of the Convention, including by recognizing their equal rights and access to land and natural resources and their full, equitable, meaningful and informed participation and leadership at all levels of action, engagement, policy and decision-making related to biodiversity.

Section I. Implementation and support mechanism and enabling conditions

14. Implementation of the Kunming-Montreal Global Biodiversity Framework and the achievement of its goals and targets will be facilitated and enhanced through support mechanisms and strategies under the Convention on Biological Diversity and its Protocols, in accordance with its provisions and the decisions adopted by the Conference of the Parties at its fifteenth meeting.

15. The full implementation of the Framework will require the provision of adequate, predictable and easily accessible financial resources from all sources on a needs basis. It further requires cooperation and collaboration in building the necessary capacity and transfer of technologies to allow Parties, especially developing country Parties, to fully implement the Framework.

Section J. Responsibility and transparency

16. The successful implementation of the Kunming-Montreal Global Biodiversity Framework requires responsibility and transparency, which will be supported by effective mechanisms for planning, monitoring, reporting and review, forming an agreed, synchronized and cyclical system.[15] This includes the following elements:

(a) National biodiversity strategies and action plans, revised or updated in alignment with the Framework and its goals and targets as the main vehicle for implementation of the Framework, including national targets communicated in a standardized format;

(b) National reports, including the headline and, as appropriate, other indicators in the monitoring framework of the Kunming-Montreal Global Biodiversity Framework;

(c) Global analysis of information in national biodiversity strategies and action plans, including national targets to assess the contribution towards the Framework;

[14] Free, prior and informed consent refers to the tripartite terminology of "prior and informed consent" or "free, prior and informed consent" or "approval and involvement.

[15] Decision 15/6 on mechanism for planning, monitoring, reporting and review.

(d) Global review of collective progress in the implementation of the Framework, including the means of implementation, based on national reports and, as appropriate, other sources;

(e) Voluntary peer reviews;

(f) Further development and testing of an open-ended forum for voluntary country reviews;

(g) Information on non-state actor commitments towards the Framework, as applicable.

17. Parties may take the outcome of the global reviews into account in the future revisions and implementation of their national biodiversity strategies and action plans, including the provision of means of implementation to developing country Parties, with a view to improving actions and efforts, as appropriate.

18. The mechanisms recognize the specific challenges faced by developing countries and the need for international cooperation to support them accordingly. Means of implementation, including capacity-building and development, and technical and financial support will be provided to Parties, especially to developing country Parties, to enable the implementation of these mechanisms for responsibility and transparency, including information on transparency of the support provided and received, and provide a full overview of aggregate support provided.

19. The mechanisms will be undertaken in a facilitative, non-intrusive, non-punitive manner, respecting national sovereignty, and avoiding placing undue burden on Parties.

20. Further recommendations on the transparency and responsibility mechanisms will be provided by the Conference of the Parties as necessary with a view to achieving the goals and targets of the Framework.

21. Future meetings of the Conference of the Parties will consider and provide any additional recommendation, as necessary, including on the basis of the outcomes from the reviews, with a view to achieving the goals and targets of the Framework.

Section K. Communication, education, awareness and uptake

22. Enhancing communication, education, and awareness on biodiversity and the uptake of the Kunming-Montreal Global Biodiversity Framework by all actors is essential to achieve its effective implementation and behavioural change, and to promote sustainable lifestyles and biodiversity values, including by:

(a) Increasing awareness, understanding and appreciation of the knowledge systems, diverse values of biodiversity and nature's contributions to people, including ecosystems functions and services and traditional knowledge and worldviews of indigenous peoples and local communities as well as of biodiversity's contribution to sustainable development;

(b) Increasing awareness on the importance of conservation and sustainable use of biodiversity and of the fair and equitable sharing of the benefits arising from the utilization of genetic resources for sustainable development, including improving sustainable livelihoods and poverty eradication efforts and its overall contribution to global and/or national sustainable development strategies;

(c) Raising awareness among all sectors and actors of the need for urgent action to implement the Framework, while enabling their active engagement in the implementation and monitoring of progress towards the achievement of its goals and targets;

(d) Facilitating understanding of the Framework, including by targeted communication, adapting the language used, level of complexity and thematic content to relevant groups of actors, considering their socioeconomic and cultural context, including by developing material that can be translated into indigenous and local languages;

(e) Promoting or developing platforms, partnerships and action agendas, including with media, civil society and educational institutions, including academia, to share information on successes, lessons learned and experiences and to allow for adaptive learning and participation in acting for biodiversity;

(f) Integrating transformative education on biodiversity into formal, non-formal and informal educational programmes, promoting curriculum on biodiversity conservation and sustainable use in educational institutions, and promoting knowledge, attitudes, values, behaviours and lifestyles that are consistent with living in harmony with nature;

(g) Raising awareness on the critical role of science, technology and innovation to strengthen scientific and technical capacities to monitor biodiversity, address knowledge gaps and develop innovative solutions to improve the conservation and sustainable use of biodiversity.

United Nations ICCD/COP(13)/CST/3

Convention to Combat Desertification

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Items resulting from the work programme of the Science-Policy Interface for the biennium 2016–2017
Sustainable land management for addressing desertification/land degradation and drought, climate change mitigation and adaptation

Sustainable land management for addressing desertification/land degradation and drought, climate change mitigation and adaptation

Synthesis report by the Science-Policy Interface

Summary

Sustainable land management (SLM) represents a holistic approach to achieving long-term productive ecosystems by integrating biophysical, sociocultural and economic needs and values. SLM is one of the main mechanisms to achieve land degradation neutrality.

To foster and facilitate the adoption of SLM practices that address desertification/land degradation and drought while mitigating climate change and enhancing climate change adaptation, the Science-Policy Interface assessed the synergistic potential of SLM practices while also critically evaluating the possible trade-offs between the different objectives. The assessment provides a scientifically sound basis to understand the potential of SLM to contribute to multiple objectives and provides practical guidance for creating an enabling environment for the selection and large-scale implementation of effective, locally adapted SLM practices.

This document presents a summary of the main scientific findings resulting from the assessment of the synergistic potential of SLM as well as conclusions and proposals for consideration by the Committee on Science and Technology at its thirteenth session.

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Contents

		Paragraphs	*Page*
I.	Background	1–6	3
II.	Summary of main scientific findings	7–26	4
	A. History, definition and scope of sustainable land management	7–9	4
	B. Sustainable land management as a land-based solution for desertification/land degradation and drought, and climate change adaptation and mitigation: synergies and trade-offs	10–17	4
	C. Barriers to the adoption and implementation of sustainable land management	18–19	6
	D. Opportunities and enabling conditions for scaling up sustainable land management	20–26	7
III.	Conclusions and proposals	27–33	8

I. Background

1. In its decision 21/COP.12 the Conference of the Parties (COP) to the United Nations Convention to Combat Desertification (UNCCD) decided to adopt the Science-Policy Interface (SPI) work programme for the biennium 2016–2017, which requested the SPI to undertake work to highlight the science-based synergistic potential of sustainable land management (SLM) practices to address desertification/land degradation and drought (DLDD), climate change mitigation and adaptation (objective 2).

2. In line with its mandate, as defined in decision 23/COP.11 and 19/COP.12, the SPI, under the leadership of the Committee on Science and Technology (CST) Bureau, was requested to provide the CST with clear and well-defined thematic guidance on scientific knowledge requirements and identify the most optimal way forward (e.g. commissioning an individual or group of experts, etc.) to address these knowledge requirements. For objective 2, the SPI decided that the commissioning of experts would be the most optimal way forward.

3. Under the leadership of the CST Bureau, the UNCCD secretariat and the SPI drafted terms of reference and proposal evaluation criteria for the scientific work relating to objective 2. Following a public tender and a selection on a competitive basis, the Basque Centre for Climate Change (BC3) was commissioned to prepare a report in association with the Mediterranean Center for Environmental Studies (CEAM) in December 2016.

4. A scoping meeting was held on 19–20 December 2016 in Bonn, Germany, at which the co-leaders of objective 2 of the SPI work programme, one SPI Co-Chair, and representatives from BC3 and the UNCCD secretariat discussed the scope and structure of the report and methods to be applied. Discussions at this meeting also considered the outcomes of the scoping questionnaire that had been distributed amongst SPI members working on SPI objective 2 to capture their expectations for the report and to invite these SPI members to provide information on case studies and literature resources, which could be of relevance for the development of the document. The main critical issues identified during the scoping meeting included: (i) the target audience and added value of the report; (ii) the breadth and detail of the report; (iii) synergies between addressing DLDD, climate change mitigation and climate change adaptation; (iv) the creation of an enabling environment for SLM; and (v) an analysis of existing or ongoing relevant scientific and science-policy initiatives to ensure added value and avoid duplication of work. At the end of that meeting, participants agreed on a draft table of contents. Thereafter, the SPI, in close cooperation with the UNCCD secretariat, supervised and reviewed the work of the commissioned experts throughout the consultancy period through conference calls and frequent email exchanges.

5. In line with decision 19/COP.12, any scientific output prepared under the supervision of the SPI (such as that being prepared under objective 2) should undergo an international, independent review process, and any output published under the name of the UNCCD should be reviewed by the COP Bureau prior to publication. In this regard, the report was prepared under the thorough and continuous supervision of the four designated SPI co-leaders of objective 2 of the SPI work programme from December 2016 to May 2017 and included an iterative internal and external scientific review. Notably, the draft went through a parallel review process by all SPI members and six external expert reviewers, selected by the SPI co-chairs, from the different United Nations regions. Moreover, the preliminary results of the report were presented and discussed at the Global Symposium on Soil Organic Carbon held in Rome on 21–23 March 2017. Subsequent to the internal and external review, the consolidated draft was once again discussed at the SPI meeting held on 27–28 April 2017. The final version of the report was submitted by the

UNCCD secretariat on 5 May 2017 to the COP Bureau for its review by 26 May 2017. The report forms the basis for developing a Science-Policy Brief, which is to be done by the SPI in a final step.

6. This document presents a summary of the main scientific findings emerging from the final report entitled "Contribution of sustainable land management to successful land-based climate change adaptation and mitigation" by the BC3 and CEAM as well as conclusions and proposals for consideration by the CST at its thirteenth session.

II. Summary of main scientific findings

A. History, definition and scope of sustainable land management

7. In document ICCD/CRIC(11)/INF.3, SLM was defined as "the use of land resources, including soils, water, animals and plants, for the production of goods to meet changing human needs, while simultaneously ensuring the long-term productive potential of these resources and the maintenance of their environmental functions''. This definition, originating from the United Nations Earth Summit in 1992, presents SLM as a holistic approach to achieving long-term productive ecosystems by integrating biophysical, sociocultural and economic needs and values.

8. The conceptual framework for land degradation neutrality (LDN), as developed by the SPI (ICCD/COP(13)/CST/2), considers SLM one of the main mechanisms to achieve LDN.

9. The concept of SLM is applicable to any ecosystem and land-use type where it contributes to addressing DLDD and climate change mitigation and adaptation, and to achieving LDN. This means it can be promoted by countries according to their individual socioecological circumstances and national planning and development objectives.

B. Sustainable land management as a land-based solution for desertification/land degradation and drought, and climate change adaptation and mitigation: synergies and trade-offs

10. Land provides vital environmental functions and ecosystem services, including provisioning, regulating, supporting and cultural services. These ecosystem services support the production of food, feed, fuel and fibre for society, regulate the risks of natural hazards, and provide cultural and spiritual services for human well-being. DLDD and climate change can negatively affect the provision of ecosystem services with severe implications for sustaining livelihoods and safeguarding human well-being.

11. There is increasing scientific evidence of the potential advantages of SLM technologies as land-based solutions to address DLDD, climate change adaptation and climate change mitigation simultaneously, while often achieving other co-benefits, such as protecting biodiversity and securing the quantity and quality of soil and water as well as economic opportunities. However, comprehensive multiobjective assessments, including assessments of co-benefits, trade-offs, barriers to implementation, and enabling conditions, are needed. The SPI assessment report helps fulfil this need.

12. There is no one-size-fits-all measure to achieve SLM. For each specific local scale, SLM strategies have to consider the complex interplay of: (i) socioecological systems and their vulnerability, resilience and adaptive capacities to human activities; and (ii) climate change impacts, as well as the interaction between these two drivers of changes. To achieve

SLM, land should be perceived as a multifunctional socioecological system whose natural capital, soil and biodiversity, while interacting with water and the atmosphere, generate the flow of ecosystem services that support human well-being by securing the lives and livelihoods of individuals and communities. Decision-making on SLM needs to consider all possible synergies and trade-offs across spatial and temporal scales.

13. Few generalizations can be made from the findings of local SLM impact studies because their effectiveness is inherently dependent upon the local socioeconomic, environmental and cultural context. Therefore, reliable quantitative assessments of the global impacts of SLM are difficult to make and were not the objective of the assessment report. Nevertheless, there is widespread scientific evidence of the advantages individual SLM practices can have in simultaneously addressing DLDD, climate change adaptation and climate change mitigation based on empirical, site-specific research. The assessment report provides many local examples, which it uses to conclude that, with regard to their simultaneous contribution to addressing DLDD, climate change mitigation and climate change adaptation, it is most efficient to have combinations of SLM practices that aim at:

(a) **Increasing and stabilizing crop productivity** through combinations of vegetation, crop diversification, soil fertility and sustainable water management practices. The contributions of these practices to climate change mitigation are likely to be less widely applied in drylands, where climate change adaptation and the reduction of DLDD through SLM practices are often the priority;

(b) **Ensuring sustainable grazing land management** by managing the timing and severity of grazing to ensure that the carrying capacity is not exceeded. Where suitable, measures may also be applied to increase and stabilize productivity in grazing lands through pasture management, diversification and selection of the most appropriate species, and the prioritization of indigenous species, taking account of their resilience to climate change;

(c) **Maintaining or increasing forest cover** through sustainable forest management, afforestation and reforestation. These practices have a significant potential for climate change mitigation and biodiversity conservation while preventing land degradation and increasing the resilience of forest-dependent communities. By enhancing forest carbon stocks and forest cover with the most appropriated mix of species and prioritizing the use of indigenous species, these practices enable adaptation to hydro-climatic and geological events such as heatwaves, droughts, floods, landslides, and sand and dust storms;

(d) **Establishing combinations of crops and multipurpose tree systems** through agroforestry practices. These mixed systems contribute to increases in soil quality, nutrient cycling and carbon sequestration and control soil erosion, while providing food and income to communities and enhancing resilience to climate change.

14. **Increasing soil organic carbon (SOC)** stocks is key to most SLM practices and creates synergies in addressing DLDD, climate change adaptation and climate change mitigation. Maintaining or increasing SOC stocks contributes to reducing greenhouse gas (GHG) emissions and removing carbon dioxide (CO_2) from the atmosphere, improves soil health and fertility through improved water and nutrient retention and availability to plants, and therefore contributes to food production potential and resilience to drought. The potential and magnitude of each of these benefits depends on the current soil carbon stocks and local environmental, socioeconomic and cultural conditions.

15. SLM practices have strong potential to enhance SOC sequestration, although estimates of this potential should consider the full GHG balance, including possible interactions between the carbon and nitrogen cycles that could affect the net climate change mitigation potential of applied practices. Even when the mitigation potential of SLM is not fully achieved, its impact on SOC should be considered since increasing SOC has crucial

positive benefits for achieving LDN, climate change adaptation, food security and the protection of biodiversity.

16. The large-scale adoption of SLM practices in all managed ecosystems (irrigated and rainfed croplands, grazing lands, forests and woodlands) could theoretically sequester about 1–2 Gt of carbon per year globally over 30–50 years, although estimates vary in magnitude depending on which land-use categories, management practices and GHG fluxes are included. At any site, the rate of SOC sequestration depends on current SOC stocks and declines over time as the saturation level is approached; the main carbon sequestration potential is in degraded soils. In soils with high SOC content, preventing SOC loss is a priority. Overall, SLM provides an opportunity to recover between 21 to 51 Gt of the lost carbon in the world's agricultural and degraded soils. The achievable local or regional SOC sequestration may be higher or lower than the theoretical SOC sequestration potential based on local environmental, socioeconomic, cultural and institutional contexts.

17. Databases such as the World Overview of Conservation Approaches and Technologies (WOCAT), TerrAfrica, the World Bank sourcebook, and the Voluntary Guidelines for Sustainable Soil Management (VGSSM) provide comprehensive recommendations and examples of SLM practices. The combined implementation of practices that address soil and water conservation, the diversification of cropping systems, the integration of crop and livestock systems, and the promotion of agroforestry are most effective and should be prioritized.

C. Barriers to the adoption and implementation of sustainable land management

18. The adoption of SLM practices is still slow despite advances in the scientific understanding of the principles and benefits of SLM. Often, the implementation of SLM is limited to a minority of innovative land-users and practitioners in traditional systems. Although SLM is increasingly promoted at the policy and international development cooperation level, land degradation is still increasing and a major global threat.

19. Identified barriers for the implementation of SLM are related to technological, ecological, institutional, economic and sociocultural issues such as:

(a) Limited finance and access to capital for the implementation and maintenance of SLM;

(b) Lack of access to appropriate technologies, practices or equipment;

(c) Lack of access to knowledge and information on SLM options and their proper implementation;

(d) National policies, regulations, and weak governance structures that inhibit decision-making at different scales; insecure land tenure; and absent or poorly functioning research and extension services;

(e) Environmental constraints for the implementation of certain SLM practices;

(f) Insufficient availability of land, human, biomass, energy, water and/or plant resources;

(g) Stakeholder perception of DLDD and climate change impacts and of the potential benefits and costs of SLM.

D. Opportunities and enabling conditions for scaling up sustainable land management

20. The success of creating synergies through SLM for addressing DLDD, climate change adaptation and climate change mitigation depends on sustaining and scaling up the implementation of SLM practices. This is an important social and institutional challenge.

21. The multiple long-term benefits brought about by SLM in addressing DLDD, climate change mitigation and climate change adaptation, contributing to multiple Sustainable Development Goals (SDGs) and protecting biodiversity, provide a global incentive for policymakers to develop and support decisions aimed at implementing SLM.

22. To trigger the wide-scale adoption of SLM practices, tangible short- and long-term benefits for land users, such as yield increases, resistance to drought and/or monetary incentives, must be evident and achievable. Land users are most likely to adopt SLM practices if they are convinced it maintains or enhances production and food security and if there are economic benefits or other direct incentives.

23. Examples of policy instruments that facilitate and incentivize the implementation of SLM practices and remove the barriers to the adoption of such practices include:

(a) Linking of existing agricultural subsidy schemes to the implementation of SLM practices or the development of new payment schemes for ecosystem services to compensate land owners and managers for the implementation or maintenance costs of SLM practices that help to protect ecosystem services for society as a whole;

(b) Support for the identification and establishment of sustainable business models and investment opportunities for SLM practices that contribute to addressing DLDD, climate change mitigation and climate change adaptation;

(c) Long-term financial and regularity commitment of governments for the implementation and maintenance of SLM practices;

(d) Policies that ensure the effective and accessible communication and availability of information arising from research on SLM practices and their implementation by facilitating qualified extension services and the exchange of open source data and by strengthening knowledge exchange networks;

(e) Increased opportunities for local training, education, capacity-building and support for the selection and implementation of SLM practices.

24. Meaningful stakeholder engagement throughout the planning, implementation and monitoring phases is necessary to co-create and pursue effective solutions. The consideration of local needs and traditional knowledge in the selection or design of new SLM practices considerably increases their level of acceptability among the envisaged land users and decision-makers. Participatory monitoring programmes can further help increase awareness and knowledge exchange. Hybrid knowledge developed through participatory processes that combine scientific evidence and local and traditional knowledge should inform policies.

25. Supporting decision-making on SLM practices requires a framework that facilitates knowledge exchange and discussion among land users, policymakers, different decision-making levels, scientists, civil society organizations (CSOs) and other stakeholders, giving full consideration to subnational social, economic and cultural realities, values and development trends.

26. A framework for identifying the impacts of existing and/or alternative transformational land management options on the natural environment and on social,

economic and cultural development requires reliable information from transdisciplinary cross-sectoral assessments at local and regional scales, with special attention given to the social and institutional system. These assessments should include co-benefits and trade-offs based on a complete value chain and socioeconomic analysis as well as on local knowledge of barriers to implementation and to establishing the enabling conditions for SLM strategies. Harnessing possible synergies among multiple objectives and goals could lead to a pragmatic and integrated framework for making the best technical choices and promoting the necessary enabling environments tailored to specific scales and circumstances.

III. Conclusions and proposals

27. There is strong scientific evidence that SLM can contribute significantly to addressing DLDD, climate change mitigation and climate change adaptation and to achieving multiple SDGs. SLM contributes directly to SDG 15 (life on land), which focuses on the achievement of LDN, by introducing land management practices that prevent the loss of healthy land through land degradation and maintain or improve the productivity of land. By enhancing food security and other livelihood benefits and increasing the resilience of the land and the populations depending on it, SLM also directly contributes to SDG 2 (zero hunger), SDG 3 (good health and well-being) and SDG 1 (end to poverty). SLM contributes to SDG 6 (clean water and sanitation) through its contribution to sustainable water management, and it has strong potential to contribute to climate change adaptation and mitigation actions as defined by SDG 13 (climate action). The SPI assessment report provides generic scientific guidance for countries for developing SLM strategies that optimize the synergies and trade-offs available through SLM and for determining the most effective means for the selection and large-scale implementation of region-specific SLM practices.

28. The report identifies barriers for large-scale implementation and provides recommendations on how to overcome these barriers by creating an enabling environment for SLM and carrying out transdisciplinary assessments at local and regional scales. The recommendations aim to enhance the capacities of Parties to meet their LDN target and achieve climate change mitigation and adaptation and other co-benefits.

29. There are no one-size-fits-all approaches to achieving SLM. Both the design and impacts of SLM practices depend on local environmental, socioeconomic and cultural conditions. The design and approach to foster SLM implementation need to consider the complex interplay of local and regional socioecological systems and their vulnerability, their resilience and adaptive capacities to human activities and climate change impacts, and the interaction between these drivers of changes.

30. In creating synergies between DLDD, climate change adaptation and climate change mitigation, it is most efficient to choose those measures that aim at: (i) increasing and stabilizing crop productivity; (ii) ensuring sustainable grazing land management; (iii) maintaining or increasing forest cover; (iv) establishing combinations of crops and multipurpose tree systems. SOC sequestration is a key element of most SLM practices and provides crucial synergies for pursuing DLDD, climate change mitigation and climate change adaptation objectives.

31. Often, there are barriers to the large-scale implementation of SLM practices. To overcome these barriers and trigger the wide-scale acceptance and successful implementation of SLM practices and the monitoring of their impacts requires the creation of an enabling environment at national and subnational levels, including:

(a) Mainstreaming best practices for SLM into national integrated land-use planning strategies;

(b) Strengthening national policy, legal and institutional frameworks for decision-making on SLM as one of the main means to achieve LDN;

(c) Developing and supporting economic incentives for the implementation of SLM through sustainable business models, subsidies and/or payments for ecosystem services schemes;

(d) Improving land tenure security to incentivize land users to invest in SLM;

(e) Organizing capacity-building at all relevant levels of decision-making to enhance awareness of the benefits of SLM practices and demonstrate methods for selecting and implementing SLM practices;

(f) Institutionalizing meaningful stakeholder engagement throughout the planning, implementation and monitoring phases of SLM strategies.

32. A high level of scientific confidence is necessary in order to make recommendations for SLM practices. Therefore, transdisciplinary research should focus on reducing uncertainties by analysing and promoting long-term experiments, scaling up results through meta-analyses and modelling studies, quantifying synergies and trade-offs for the natural environment and human well-being, and identifying barriers to implementation and opportunities for creating an enabling environment.

33. The SPI suggests that the CST consider the following proposals and recommends that the COP:

(a) ***Proposal 1:*** **Endorse the scientific assessment of synergies and trade-offs brought about by SLM in addressing DLDD, climate change mitigation and climate change adaptation, indicating that the assessment reflects the present level of common understanding and encourages further development and practical verification;**

(b) ***Proposal 2:*** **Invite Parties to consider the use of locally adapted SLM practices as effective means to achieve land-based national objectives related to (i) addressing DLDD, climate change mitigation and climate change adaptation; and (ii) achieving LDN, taking into consideration possible synergistic national actions related to the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity;**

(c) ***Proposal 3:*** **Call upon Parties to develop and promote policy instruments that help to overcome technological, institutional, economic and sociocultural barriers to the large-scale implementation of local SLM practices by creating an enabling environment at national and subnational levels based on: (i) mainstreaming SLM practices into national integrated land-use planning strategies; (ii) supporting the implementation of SLM as one of the means to achieve LDN; (iii) developing and supporting economic incentives for the implementation of SLM; (iv) improving land tenure security to incentivize land users to invest in SLM; (v) supporting capacity-building on SLM practices at all relevant levels of decision-making; and (vi) institutionalizing meaningful stakeholder engagement throughout the planning, implementation and monitoring phases of SLM strategies;**

(d) ***Proposal 4:*** **Invite Parties to institutionalize meaningful stakeholder engagement throughout the planning, implementation and monitoring phases of SLM strategies to facilitate the use of scientific and local knowledge, optimize knowledge exchange and discussion between land users, policymakers, scientists, CSOs and other**

stakeholders, and increase chances that effective local SLM solutions are embraced at the required scale and implemented locally;

(e) ***Proposal 5:*** **Invite Parties to initiate and support the development of transdisciplinary research programmes aimed at: (i) performing multi-objective assessments, including synergies and trade-offs for the natural environment and human well-being; (ii) identifying barriers and enabling conditions for the implementation of SLM practices; and (iii) building on participatory research methods;**

(f) ***Proposal 6:*** **Request the SPI to continue working on the assessment to provide science-based evidence on the contribution SLM has on enhancing the livelihoods and socioeconomic conditions of people affected by DLDD as part of its work programme for 2018-2019.**

Decision 7/COP.13

The future strategic framework of the Convention

The Conference of the Parties,

Recalling decisions 3/COP.8, 12/COP.11, 7/COP.12, 8/COP.12 and 10/COP.12,

Recognizing that the adoption of a strategic framework contributes to a more focused, targeted, effective and efficient implementation of the UNCCD and to systematic monitoring and assessment of progress in the implementation of the Convention,

Acknowledging the outcomes of the United Nations Conference on Sustainable Development (Rio+20) related to desertification, land degradation and drought, as well as the Aichi Biodiversity Targets, Paris Agreement and Sendai Framework for Disaster Risk Reduction 2015−2030,

Reaffirming the 2030 Agenda for Sustainable Development and the Addis Ababa Action Agenda which is an integral part of it, and *recognizing* the important impact that United Nations Convention to Combat Desertification (UNCCD) implementation will have on the overall achievement of their objectives,

Welcoming the endorsement of the scientific conceptual framework for land degradation neutrality[6] and the work done by the Global Mechanism, particularly to put this concept into action through the voluntary Land Degradation Neutrality Target Setting Programme,

Highlighting the importance of civil society in all matters relating to UNCCD implementation at local, national, subregional and regional levels and reconfirming the important role of civil society in the implementation of the Convention and the strategic framework (UNCCD 2018−2030 Strategic Framework) annexed to this decision,

Acknowledging that gender equality and the empowerment of women, girls and youth will make a crucial contribution to the implementation of the Convention and the UNCCD 2018−2030 Strategic Framework and to achieving the goals of the 2030 Agenda for Sustainable Development,

Noting the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security[7] and *recognizing* their potential contribution to the effective implementation of the UNCCD 2018−2030 Strategic Framework,

Recalling decision 15/COP.13 that requests the Committee on Science and Technology to assist in the work relating to the establishment and improvement of the monitoring framework for strategic objective 3 of the UNCCD 2018−2030 Strategic Framework,

Emphasizing the potential for synergies in efforts to address desertification/land degradation and drought and other major environmental challenges,

[6] Decision 18/COP.13.

[7] <www.fao.org/docrep/016/i2801e/i2801e.pdf>.

Welcoming the continued support from the Global Environment Facility for the implementation of the Convention, in particular the funding of enabling activities by the Global Environment Facility, including the alignment of national action programmes,

1. *Decides* to adopt the UNCCD 2018−2030 Strategic Framework annexed to this decision;

2. *Strongly encourages* Parties to apply and, as appropriate, align with the UNCCD 2018−2030 Strategic Framework in their national policies, programmes, plans and processes relating to desertification/land degradation and drought, including in their National Action Programmes, as appropriate;

3. *Decides* that while implementing the UNCCD 2018−2030 Strategic Framework, all UNCCD stakeholders and partners should take into account the need for gender-responsive policies and measures; they will strive to ensure the full and effective participation of both men and women in planning, decision-making and implementation at all levels, and enhance the empowerment of women, girls and youth in the affected areas;

4. *Encourages* the Parties to further enhance the involvement of civil society in the implementation of the Convention and the UNCCD 2018−2030 Strategic Framework;

5. *Also requests* UNCCD institutions and bodies, and invites multilateral and bilateral partners to support Parties in the implementation of the UNCCD 2018–2030 Strategic Framework.

10th plenary meeting
15 September 2017

Annex

The UNCCD 2018–2030 Strategic Framework

I. Introduction

1. Desertification/land degradation and drought (DLDD) are challenges of a global dimension. They contribute to and aggravate economic, social and environmental problems such as poverty, poor health, lack of food security, biodiversity loss, water scarcity, reduced resilience to climate change and forced migration. They continue to pose serious challenges to the sustainable development of all countries, particularly affected countries.

2. Addressing DLDD will involve long-term integrated strategies that simultaneously focus on the improved productivity of land and the rehabilitation, conservation and sustainable management of land and water resources. The United Nations Convention to Combat Desertification (UNCCD) can play a central role in addressing these issues through capacity-building, the sharing of successful experiences, technology transfer, the provision of scientific support, awareness-raising, mobilization of resources and the provision of assistance to countries in implementing policies at national, subregional, regional and international levels.

3. The strategy will contribute to (i) achieving the objectives of the Convention and the 2030 Agenda for Sustainable Development, in particular regarding Sustainable Development Goal (SDG) 15 and target 15.3: "by 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world" and other interrelated SDGs, within the scope of the Convention; (ii) improving the living conditions of affected populations; and (iii) enhancing ecosystems services.

II. Vision

4. A future that avoids, minimizes, and reverses desertification/land degradation and mitigates the effects of drought in affected areas at all levels and strive to achieve a land degradation-neutral world consistent with the 2030 Agenda for Sustainable Development, within the scope of the Convention.

III. Strategic objectives and expected impacts

5. The following "strategic objectives" will guide the actions of all UNCCD stakeholders and partners in the period 2018–2030. Meeting these long-term objectives will contribute to achieving the above-mentioned vision within the scope of the Convention, taking into account particular regional and national conditions.

Strategic objective 1: To improve the condition of affected ecosystems, combat desertification/land degradation, promote sustainable land management and contribute to land degradation neutrality

Expected impact 1.1 Land productivity and related ecosystems services are maintained or enhanced.

Expected impact 1.2 The vulnerability of affected ecosystems is reduced and the resilience of ecosystems is increased.

Expected impact 1.3 National voluntary land degradation neutrality targets are set and adopted by countries wishing to do so, related measures are identified and implemented, and necessary monitoring systems are established.

Expected impact 1.4 Measures for sustainable land management and the combating of desertification/land degradation are shared, promoted and implemented.

Strategic objective 2: To improve the living conditions of affected populations

Expected impact 2.1 Food security and adequate access to water for people in affected areas is improved.

Expected impact 2.2 The livelihoods of people in affected areas are improved and diversified.

Expected impact 2.3 Local people, especially women and youth, are empowered and participate in decision-making processes in combating DLDD.

Expected impact 2.4 Migration forced by desertification and land degradation is substantially reduced.

Strategic objective 3: To mitigate, adapt to, and manage the effects of drought in order to enhance resilience of vulnerable populations and ecosystems

Expected impact 3.1 Ecosystems' vulnerability to drought is reduced, including through sustainable land and water management practices.

Expected impact 3.2 Communities' resilience to drought is increased.

Strategic objective 4: To generate global environmental benefits through effective implementation of the UNCCD

Expected impact 4.1 Sustainable land management and the combating of desertification/land degradation contribute to the conservation and sustainable use of biodiversity and addressing climate change.

Expected impact 4.2 Synergies with other multilateral environmental agreements and processes are enhanced.

Strategic objective 5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level

Expected impact 5.1 Adequate and timely public and private financial resources are further mobilized and made available to affected country Parties, including through domestic resource mobilization.

Expected impact 5.2 International support is provided for implementing effective and targeted capacity-building and "on-the-ground interventions" in affected country Parties to support the implementation of the Convention, including through North–South, South–South and triangular cooperation.

Expected impact 5.3 Extensive efforts are implemented to promote technology transfer, especially on favourable terms and including on concessional and preferential terms, as mutually agreed, and to mobilize other non-financial resources.

IV. Implementation framework

6. The Strategy will be implemented primarily through actions at national or subregional levels, with the support of UNCCD institutions, partners and other relevant stakeholders. This section defines the roles and responsibilities of the various Parties, UNCCD institutions, partners and stakeholders in meeting the above-mentioned strategic objectives.

A. Parties

7. Parties bear the main responsibility in the implementation of The Strategy, including through their national action programmes, and would need to steer implementation in accordance with their national priorities and in a spirit of international solidarity and partnership.

8. The Strategy will become an effective tool that guides national, subnational and local implementation while enabling Parties to undertake an assessment of implementation at the level of the Committee for the Review of the Implementation of the Convention (CRIC). Each Party could implement The Strategy by taking advantage of partnerships, including public–private partnerships, and innovative agreements.

9. Through this Strategy and in accordance with their obligations as stated in the Convention, Parties aim to:

With respect to financial and non-financial resources:

(a) Increase mobilization of financial and non-financial resources for the implementation of the Convention from international and domestic, public and private sources as well as from local communities, including non-traditional funding sources, and climate finance;

(b) Take advantage of the opportunity to use land degradation neutrality as a framework to enhance the coherence, effectiveness and multiple benefits of investments;

(c) To improve the use of existing and/or innovative financial processes and institutions (such as the Global Environment Facility or other newer funds);

With respect to policy and planning:

(d) Develop, implement, revise and regularly monitor, as appropriate, national, subregional and regional action programmes and/or plans as effective tools for UNCCD implementation;

(e) Establish policies and enabling environments for promoting and implementing solutions to combat desertification/land degradation and mitigate the effects of drought, including prevention, relief and recovery;

(f) Leverage synergies and integrate DLDD, while optimizing efficacy and eliminating duplication of efforts, into (i) national plans related to the other multilateral environmental agreements, in particular the other Rio conventions; and (ii) other international commitments as appropriate, within their respective mandates;

(g) Mainstream DLDD as appropriate into economic, environmental and social policies, with a view to increasing the impact and effectiveness of the implementation of the Convention;

(h) Establish national policies, measures and governance for drought preparedness and management, including drought contingency plans, according to the mandate of the Convention;

With respect to actions on the ground:

(i) Implement sustainable land management practices;

(j) Implement restoration and rehabilitation practices in order to assist with the recovery of ecosystem functions and services;

(k) Develop and operationalize drought risk management, monitoring and early warning systems and safety-net programmes, as appropriate;

(l) Promote alternative livelihoods;

(m) Establish systems for sharing information and knowledge and facilitate networking on best practices and approaches to drought management.

B. Committee for the Review of the Implementation of the Convention

10. Under the authority and guidance of the Conference of the Parties (COP), the CRIC plays a central role in assisting the COP in the review of the implementation of the Convention and this Strategy by, inter alia:

(a) Assessing reports submitted by Parties and other reporting entities with the aim of producing targeted recommendations and draft decisions for consideration by the COP;

(b) Facilitating the exchange of information on measures adopted by Parties through formal and informal interactive sessions and online platforms on topical issues, including capacity-building, best practices and lessons learned relating to on-the-ground implementation.

C. Committee on Science and Technology

11. At the request of the COP, the Committee on Science and Technology will provide, with input from the Science–Policy Interface, scientific advice for the assessment and implementation of the Convention and The Strategy by:

(a) Contributing to improving the scientific understanding of and knowledge on the processes leading to and solutions to address desertification/land degradation and drought;

(b) Contributing to addressing specific needs of local populations and helping to identify solutions that improve the standards of living of people in affected areas;

(c) Facilitating networking among scientific institutions related to DLDD and ongoing activities through the Science–Policy Interface to provide recommendations for implementation;

(d) Assisting the CRIC through the timely provision of scientific advice on methodological matters related to reporting.

D. Global Mechanism

12. The Global Mechanism has a central responsibility to contribute to financial mobilization, support technology transfer and explore opportunities for increasing financing for the implementation of the Convention and The Strategy. It does this by:

(a) Supporting resource mobilization for the implementation of the Convention and The Strategy;

(b) Assisting affected country Parties in exploring solutions for resource mobilization corresponding to the needs expressed in the countries' UNCCD action programmes;

(c) Spearheading, in collaboration with relevant partners, the establishment of new funding options, including the possible creation of an independent Land Degradation Neutrality Fund (LDN Fund) for the implementation of The Strategy.

E. Secretariat

13. The successful implementation of this Strategy requires the continued strong core servicing advocacy, agenda-setting and representation functions of the UNCCD secretariat with commensurate capacity and resources in order to support Parties, the COP and the subsidiary bodies of the Convention in fulfilling their respective roles.

V. Monitoring, reporting and evaluation

14. Monitoring the progress made in the implementation of The New Strategy will be done through national reporting and sharing of national experiences, best practices and lessons learned from Parties to the COP and a review and evaluation by the CRIC for consideration by the COP.

15. Reporting on progress towards the strategic objectives is required provided that (i) Parties have sufficient official national data/information to report or validate national estimates derived from global data sources; and (ii) reporting is provided primarily from official national data.

16. Indicators for strategic objectives should be reviewed and fine-tuned, as necessary and appropriate, in consideration of the reporting system/indicators for the SDGs and with reference to the follow-up and review processes of the 2030 Agenda for Sustainable Development, the Rio conventions and other relevant MEAs in order to improve their synergetic implementation and avoid duplication.

17. Reporting on chapter IV of The Strategy (implementation framework) will be done through qualitative reporting and on a voluntary basis until the CRIC has considered refining the reporting guidelines. In order to ensure that interactive sessions can be organized during sessional and intersessional sessions of the CRIC on information provided in reports, the COP will identify, where needed, specific topics that will be reviewed during those sessions.

Progress indicators used to report on strategic objectives 1–4 of the Strategy

18. Indicators used for reporting on The Strategy are those identified by Parties in decisions 22/COP.11 (for strategic objectives 1–3) and 15/COP.12 (for strategic objective

4). In addition to indicators agreed by the COP, the Intergovernmental Working Group on the future strategic framework of the Convention also introduced new indicators for strategic objective 4 (see table below).

19. Parties may wish to report on progress towards expected impacts for strategic objectives 1–3 which are not fully covered by this set of indicators by using nationally relevant quantitative indicators or qualitative information, as appropriate.

Table
List of progress indicators used to report on strategic objectives 1–5 of the Strategy

Strategic objective 1: To improve the condition of affected ecosystems	
SO 1-1	Trends in land cover
SO 1-2	Trends in land productivity or functioning of the land
SO 1-3	Trends in carbon stocks above and below ground
Strategic objective 2: To improve the living conditions of affected populations	
SO 2-1	Trends in population living below the relative poverty line and/or income inequality in affected areas
SO 2-2	Trends in access to safe drinking water in affected areas
Strategic objective 3: To mitigate, adapt to, and manage the effects of drought in order to enhance resilience of vulnerable populations and ecosystems	
	Monitored through qualitative information
Strategic objective 4: To generate global environmental benefits through effective implementation of the UNCCD	
SO 4-1	Trends in carbon stocks above and below ground
SO 4-2	Trends in abundance and distribution of selected species
Strategic objective 5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level	
SO 5-1	Trends in international bilateral and multilateral official development assistance
SO 5-2	Trends in domestic public resources
SO 5-3	Trends in number of co-financing partners
SO 5-4	Resources mobilized from innovative sources of finance, including from the private sector

The indicators below were identified to report on achievements made towards reaching the Sustainable Development Goal (SDG) 17 "Strengthen the means of implementation and revitalize the global partnership for sustainable development" and particularly SDG targets related to technology and capacity-building. These indicators may be subject to change within the framework of the SDG process[a] and are hence listed as a tentative future source of information.

SO 5-5	Total amount of approved funding for developing countries and countries with economies in transition to promote the development, transfer, dissemination and diffusion of environmentally sound technologies
SO 5-6	Number of science and/or technology cooperation agreements and programmes between countries, by type of cooperation
SO 5-7	United States dollar value of financial and technical assistance, including through North–South, South–South and triangular cooperation, committed to developing countries and countries with economies in transition

[a] Indicators and information on SDG 17 will be reviewed yearly by the High Level Political Forum on Sustainable Development.

Decision 8/COP.15

Promotion and strengthening of relationships with other relevant conventions and international organizations, institutions and agencies

The Conference of the Parties,

Recalling decision 8/COP.14,

Acknowledging that the implementation of the Convention benefits from strong and effective collaborations to leverage synergies with relevant organizations and international instruments including, inter alia, the Convention on Biological Diversity Post-2020 Global Biodiversity Framework, the Group of 20 Global Initiative on Reducing Land Degradation and Enhancing Conservation of Terrestrial Habitats, the United Nations Decade on Ecosystem Restoration 2021–2030 and the United Nations Framework Convention on Climate Change and its Paris Agreement,

Reaffirming the usefulness of the three land-based progress indicators as set out in decision 9/COP.12 for monitoring and reporting under the Rio conventions and the Sustainable Development Goals, which are coherent with the progress indicators/metrics adopted in decision 22/COP.11,

Welcoming the progress to enhance existing and establish new partnerships as well as the renewed efforts to coordinate activities with the other Rio conventions through the Joint Liaison Group to support the implementation of the Convention's objectives,

Noting that the Group on Earth Observations Land Degradation Neutrality Initiative was established in response to decision 9/COP.13, and *acknowledging with appreciation* the important contribution of the Group on Earth Observations Land Degradation Neutrality Initiative to the development of data quality standards, education programmes and practical tools for the planning, implementation, monitoring and reporting of land degradation neutrality,

1. *Invites* Parties, as appropriate, to engage at the national level to explore complementarities in the implementation of and reporting on the three Rio conventions;

2. *Also invites* Parties to explore complementarities between land degradation neutrality targets, Nationally Determined Contributions, and National Biodiversity Strategies and Action Plans, as well as national targets under the Sendai Framework, and related planning, programming, reporting and monitoring in order to achieve the Convention's objectives;

3. *Further invites* Parties to explore ways to integrate satellite data information into their capacity development efforts and data analytic tools for evidence-based decision-making to support land degradation neutrality implementation through integrated land use planning informed, as appropriate, by the Group on Earth Observations Land Degradation Neutrality Initiative and its partners and other relevant stakeholders;

4. *Invites* developed country Parties, other Parties in a position to do so, international financial organizations, civil society organizations and private sector institutions to contribute, financially or in-kind, to global partnerships, alliances and coalitions on Earth observations, particularly, the Group on Earth Observations Land Degradation Neutrality Initiative, and engage in regional and bilateral cooperation to address desertification/land degradation and drought;

5. *Requests* the secretariat and appropriate Convention bodies and institutions, within their respective mandates and existing resources, to:

(a) Continue to enhance existing and seek new partnerships that enhance the implementation of the Convention, address desertification/land degradation and drought, and help achieve voluntary national land degradation neutrality targets;

(b) Continue to strengthen collaboration with relevant United Nations entities and other partners to provide practical tools, technical guidance and capacity-building related to

the implementation of United Nations Convention to Combat Desertification objectives and policy frameworks, and thematic priorities as defined by the Conference of the Parties;

(c) Develop, in partnership with relevant organizations and networks, stakeholder engagement plans, including awareness-raising strategies, for youth, civil society organizations, the media and the private sector;

6. *Invites* Parties to explore complementarities within relevant Multilateral Environmental Agreements, within their respective mandates and goals, in the achievement of the objectives of the United Nations Convention to Combat Desertification at the national level, including, as appropriate, in the implementation of sustainable land management, ecosystem-based approaches or nature-based solutions;

7. *Requests* the secretariat to present a report on the implementation of this decision at the sixteenth session of the Conference of the Parties.

6th plenary meeting
20 May 2022

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General Assembly

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19 September 1997

Nineteenth special session
Agenda item 8

RESOLUTION ADOPTED BY THE GENERAL ASSEMBLY

[without reference to a Main Committee (A/S-19/29)]

S/19-2. Programme for the Further Implementation of Agenda 21

The General Assembly

Adopts the Programme for the Further Implementation of Agenda 21 annexed to the present resolution.

11th plenary meeting
28 June 1997

ANNEX

Programme for the Further Implementation of Agenda 21

Adopted by the General Assembly at its nineteenth special session
(23-28 June 1997)

CONTENTS

		Paragraphs
I.	STATEMENT OF COMMITMENT	1 - 6
II.	ASSESSMENT OF PROGRESS MADE SINCE THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT	7 - 21
III.	IMPLEMENTATION OF AGENDA 21 IN AREAS REQUIRING URGENT ACTION	22 - 115
	A. Integration of economic, social and environmental	

objectives ..... 23 - 32

B. Sectors and issues ..... 33 - 75

C. Means of implementation ..... 76 - 115

IV. INTERNATIONAL INSTITUTIONAL ARRANGEMENTS ..... 116 - 137

A. Greater coherence in various intergovernmental organizations and processes ..... 117 - 121

B. Role of relevant organizations and institutions of the United Nations system ..... 122 - 129

C. Future role and programme of work of the Commission on Sustainable Development ..... 130 - 132

D. Methods of work of the Commission on Sustainable Development ..... 133 - 137

Appendix. Multi-year programme of work for the Commission on Sustainable Development, 1998-2002

I. STATEMENT OF COMMITMENT

1. At the nineteenth special session of the United Nations General Assembly, we - heads of State or Government and other heads of delegations, together with our partners from international institutions and non-governmental organizations - have gathered to review progress achieved over the five years that have passed since the United Nations Conference on Environment and Development and to re-energize our commitment to further action on goals and objectives set out by the Earth Summit.

2. The United Nations Conference on Environment and Development was a landmark event. At that Conference, we launched a new global partnership for sustainable development - a partnership that respects the indivisibility of environmental protection and the development process. It is founded on a global consensus and political commitment at the highest level. Agenda 21,[1] adopted at Rio de Janeiro, addresses the pressing environment and development problems of today and also aims at preparing the world for the challenges of the next century in order to attain the long-term goals of sustainable development.

3. Our focus at this special session has been to accelerate the implementation of Agenda 21 in a comprehensive manner and not to renegotiate its provisions or to be selective in its implementation. We reaffirm that Agenda 21 remains the fundamental programme of action for achieving sustainable development. We reaffirm all the principles contained in the Rio Declaration on Environment and Development[2] and the Forest Principles.[3] We are convinced that the achievement of sustainable development requires the integration of its economic, environmental and social components. We recommit to working together - in the spirit of global partnership - to reinforce our joint efforts to meet equitably the needs of present and future generations.

4. We acknowledge that a number of positive results have been achieved, but we are deeply concerned that the overall trends with respect to sustainable development are worse today than they were in 1992. We emphasize that the implementation of Agenda 21 in a comprehensive manner remains vitally important and is more urgent now than ever.

5. Time is of the essence in meeting the challenges of sustainable development as set out in the Rio Declaration and Agenda 21. To this end, we recommit ourselves to the global partnership established at the United Nations Conference on Environment and Development and to the continuous dialogue and action inspired by the need to achieve a more efficient and equitable world economy, as a means to provide a supportive international climate for

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[1] Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, vol. I, Resolutions Adopted by the Conference (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

[2] Ibid., annex I.

[3] Ibid., annex III (Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development for All Types of Forests).

achieving environment and development goals. We therefore, pledge to continue to work together, in good faith and in the spirit of partnership, to accelerate the implementation of Agenda 21. We invite everyone throughout the world to join us in our common cause.

6. We commit ourselves to ensuring that the next comprehensive review of Agenda 21 in the year 2002 demonstrates greater measurable progress in achieving sustainable development. The present Programme for the Further Implementation of Agenda 21 is our vehicle for achieving that goal. We commit ourselves to fully implementing this Programme.

II. ASSESSMENT OF PROGRESS MADE SINCE THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT[4,5]

7. The five years that have elapsed since the United Nations Conference on Environment and Development have been characterized by the accelerated globalization of interactions among countries in the areas of world trade, foreign direct investment and capital markets. Globalization presents new opportunities and challenges. It is important that national and international environmental and social policies be implemented and strengthened in order to ensure that globalization trends have a positive impact on sustainable development, especially in developing countries. The impact of recent trends in globalization on developing countries has been uneven. A limited number of developing countries have been able to take advantage of those trends, attracting large inflows of external private capital and experiencing significant export-led growth and acceleration of growth in per capita gross domestic product. Many other countries, however, in particular African countries and the least developed countries, have shown slow or negative growth and continue to be marginalized. As a result, they generally experienced stagnating or falling per capita gross domestic product through 1995. In these and in some other developing countries, the problems of poverty, low levels of social development, inadequate infrastructure and lack of capital have prevented them from benefiting from globalization. While continuing their efforts to achieve sustainable development and to attract new investments, these countries still require international assistance in their efforts directed towards sustainable development. In particular the least developed countries continue to be heavily dependent on a declining volume of official development assistance for the capacity-building and infrastructure development required to provide for basic needs and more effective participation in the globalizing world economy. In an increasingly interdependent world economy, the responsible conduct of monetary and other macroeconomic policies requires that their potential impact on other countries be taken into account. Since the Conference, the countries with economies in transition have achieved significant progress in implementing the principles of sustainable development. However, the need for full integration of these

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[4] As provided in Agenda 21, the term "Governments", when used therein, will be deemed to include as well the European Economic Community (now the European Union) within its area of competence.

[5] All references in the present document to the platforms for or programmes of action of major conferences should be considered in a manner consistent with the reports of those conferences.

countries into the world economy remains one of the crucial problems on their way towards sustainable development. The international community should continue to support these countries in their efforts to accelerate the transition to a market economy and to achieve sustainable development.

8. Although economic growth - reinforced by globalization - has allowed some countries to reduce the proportion of people in poverty, for others marginalization has increased. Too many countries have seen economic conditions worsen and public services deteriorate; the total number of people in the world living in poverty has increased. Income inequality has increased among countries and also within them, unemployment has worsened in many countries, and the gap between the least developed countries and other countries has grown rapidly in recent years. On a more positive note, population growth rates have been declining globally, largely as a result of expanded basic education and health care. That trend is projected to lead to a stable world population in the middle of the twenty-first century. There has also been progress in social services, with expanding access to education, declining infant mortality and increasing life expectancy in most countries. However, many people, particularly in the least developed countries, still do not have access to adequate food and basic social services or to clean water and sanitation. Reducing current inequities in the distribution of wealth and access to resources, both within and among countries, is one of the most serious challenges facing humankind.

9. Five years after the United Nations Conference on Environment and Development, the state of the global environment has continued to deteriorate, as noted in the Global Environment Outlook[6] of the United Nations Environment Programme, and significant environmental problems remain deeply embedded in the socio-economic fabric of countries in all regions. Some progress has been made in terms of institutional development, international consensus-building, public participation and private sector actions and, as a result, a number of countries have succeeded in curbing pollution and slowing the rate of resource degradation. Overall, however, trends are worsening. Many polluting emissions, notably of toxic substances, greenhouse gases and waste volumes are continuing to increase although in some industrialized countries emissions are decreasing. Marginal progress has been made in addressing unsustainable production and consumption patterns. Insufficient progress has also been identified in the field of environmentally sound management and adequate control of transboundary movements of hazardous and radioactive wastes. Many countries undergoing rapid economic growth and urbanization are also experiencing increasing levels of air and water pollution, with accumulating impacts on human health. Acid rain and transboundary air pollution, once considered a problem only in the industrialized countries, are increasingly becoming a problem in many developing regions. In many poorer regions of the world, persistent poverty is contributing to accelerated degradation of natural resources and desertification has spread. In countries seriously affected by drought and/or desertification, especially those in Africa, their agricultural productivity, among other things, is uncertain and continues to decline, thereby hampering their efforts to achieve sustainable development. Inadequate and unsafe water supplies are affecting an increasing number of people worldwide, aggravating problems of ill health and food insecurity among the poor. Conditions in natural habitats and fragile ecosystems, including mountain ecosystems, are still deteriorating in all regions of the world,

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[6] Oxford, United Kingdom, Oxford University Press, 1997.

resulting in diminishing biological diversity. At the global level, renewable resources, in particular fresh water, forests, topsoil and marine fish stocks, continue to be used at rates beyond their viable rates of regeneration; without improved management, this situation is clearly unsustainable.

10. While there has been progress in material and energy efficiency, particularly with reference to non-renewable resources, overall trends remain unsustainable. As a result, increasing levels of pollution threaten to exceed the capacity of the global environment to absorb them, increasing the potential obstacles to economic and social development in developing countries.

11. Since the United Nations Conference on Environment and Development, extensive efforts have been made by Governments and international organizations to integrate environmental, economic and social objectives into decision-making by elaborating new policies and strategies for sustainable development or by adapting existing policies and plans. As many as one hundred and fifty countries have responded to the commitments established at the Conference through national-level commissions or coordinating mechanisms designed to develop an integrated approach to sustainable development.

12. The major groups have demonstrated what can be achieved by taking committed action, sharing resources and building consensus, reflecting grass-roots concern and involvement. The efforts of local authorities are making Agenda 21 and the pursuit of sustainable development a reality at the local level through the implementation of "local Agenda 21s" and other sustainable development programmes. Non-governmental organizations, educational institutions, the scientific community and the media have increased public awareness and discussion of the relations between environment and development in all countries. The involvement, role and responsibilities of business and industry, including transnational corporations, are important. Hundreds of small and large businesses have made "green business" a new operating mode. Workers and trade unions have established partnerships with employers and communities to encourage sustainable development in the workplace. Farmer-led initiatives have resulted in improved agricultural practices contributing to sound resource management. Indigenous people have played an increasing role in addressing issues affecting their interests and particularly concerning their traditional knowledge and practices. Young people and women around the world have played a prominent role in galvanizing communities into recognizing their responsibilities to future generations. Nevertheless, more opportunities should be created for women to participate effectively in economic, social and political development as equal partners in all sectors of the economy.

13. Among the achievements since the United Nations Conference on Environment and Development have been the entry into force of the United Nations Framework Convention on Climate Change,[7] the Convention on Biological Diversity[8] and the United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification,

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[7] A/AC.237/18 (Part II)/Add.1 and Corr.1, annex I.

[8] United Nations Environment Programme, Convention on Biological Diversity (Environmental Law and Institution Programme Activity Centre), June 1992.

particularly in Africa;[9] the conclusion of the Agreement on the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks;[10] the adoption of the Programme of Action for the Sustainable Development of Small Island Developing States;[11] the elaboration of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities;[12] and the entry into force of the United Nations Convention on the Law of the Sea.[13] Implementation of these important commitments and of others adopted before the United Nations Conference on Environment and Development by all the parties to them, remains however, to be carried out, and in many cases further strengthening of their provisions is required as well as the mechanisms for putting them into effect. The establishment, restructuring, funding and replenishment of the Global Environment Facility were a major achievement. However, its levels of funding and replenishment have not been sufficient fully to meet its objectives.

14. Progress has been made in incorporating the principles contained in the Rio Declaration on Environment and Development - including the principle of common but differentiated responsibilities, which embodies the important concept of and basis for international partnership; the precautionary principle; the polluter pays principle; and the environmental impact assessment principle - in a variety of international and national legal instruments. While some progress has been made in implementing United Nations Conference on Environment and Development commitments through a variety of international legal instruments, much remains to be done to embody the Rio principles more firmly in law and practice.

15. A number of major United Nations conferences have advanced international commitment for the achievement of long-term goals and objectives directed towards sustainable development.

16. Organizations and programmes of the United Nations system have played an important role in the progress made in the implementation of Agenda 21. The Commission on Sustainable Development was established to review progress achieved in the implementation of Agenda 21, advance global dialogue and foster partnerships for sustainable development. The Commission has catalysed new action and commitments and has contributed to the deliberations on sustainable development among a wide variety of partners within and outside

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[9] A/49/84/Add.2, annex, appendix II.

[10] A/CONF.164/37; see also A/50/550, annex I.

[11] Report of the Global Conference on the Sustainable Development of Small Island Developing States, Bridgetown, Barbados, 25 April-6 May 1994 (United Nations publication, Sales No. E.94.I.18 and corrigenda), chap. I, resolution 1, annex II.

[12] A/51/116, annex II.

[13] Official Records of the Third United Nations Conference on the Law of the Sea, vol. XVII (United Nations publication, Sales No. E.84.V.3), document A/CONF.62/122.

the United Nations system. Although much remains to be done, progress has also been made at the national, regional and international levels in implementing the United Nations Conference on Environment and Development Forest Principles, including through the Commission's Ad Hoc Intergovernmental Panel on Forests.

17. Provision of adequate and predictable financial resources and the transfer of environmentally sound technologies to developing countries are critical elements for the implementation of Agenda 21. However, while some progress has been made, much remains to be done to activate the means of implementation set out in Agenda 21, in particular in the areas of finance and technology transfer, technical assistance and capacity-building.

18. Most developed countries have still not reached the United Nations target, reaffirmed by most countries at the United Nations Conference on Environment and Development, of committing 0.7 per cent of their gross national product to official development assistance or the United Nations target, as agreed, of committing 0.15 per cent of gross national product as official development assistance to the least developed countries. Regrettably, on average, official development assistance as a percentage of the gross national product of developed countries has drastically declined in the post-Conference period, from 0.34 per cent in 1992 to 0.27 per cent in 1995, but official development assistance has taken more account of the need for an integrated approach to sustainable development.

19. In other areas, results have been encouraging since the United Nations Conference on Environment and Development. There has been a sizeable expansion of private flows of financial resources from developed to a limited number of developing countries and, in a number of countries, efforts have been made in support of domestic resource mobilization, including the increasing use of economic instruments to promote sustainable development.

20. In many developing countries, the debt situation remains a major constraint on achieving sustainable development. Although the debt situation of some middle-income countries has improved, there is a need to continue to address the debt problems of the heavily indebted poor countries, which continue to face unsustainable external debt burdens. The recent World Bank/International Monetary Fund Heavily Indebted Poor Countries Initiative could help to address that issue with the cooperation of all creditor countries. Further efforts by the international community are still required to remove debt as an impediment to sustainable development.

21. Similarly, technology transfer and technology-related investment from public and private sources, which are particularly important to developing countries, have not been realized as outlined in Agenda 21. Although increased private flows have led to investments in industry and technology in some developing countries and economies in transition, many other countries have been left behind. Conditions in some of these countries have been less attractive to private sector investment and technological change has been slower, thus limiting their ability to meet their commitments to Agenda 21 and other international agreements. The technology gap between developed countries and, in particular, the least developed countries has widened.

III. IMPLEMENTATION OF AGENDA 21 IN AREAS REQUIRING URGENT ACTION

22. Agenda 21 and the principles contained in the Rio Declaration on Environment and Development established a comprehensive approach to the achievement of sustainable development. While it is the primary responsibility of national Governments to achieve the economic, social and environmental objectives of Agenda 21, it is essential that international cooperation be reactivated and intensified, recognizing, inter alia, the principle of common but differentiated responsibilities as set forth in Principle 7 of the Rio Declaration. This requires the mobilization of stronger political will and the invigoration of a genuine new global partnership, taking into account the special needs and priorities of developing countries. Such an approach remains as relevant and as urgently needed as ever. It is clear from the assessment above that, although progress has been made in some areas, a major new effort will be required to achieve the goals established at the United Nations Conference on Environment and Development, particularly in areas of cross-sectoral matters where implementation has yet to be achieved. The proposals set out in sections A to C below outline strategies for accelerating progress towards sustainable development. The sections are equally important and must be considered and implemented in a balanced and integrated way.

A. Integration of economic, social and environmental objectives

23. Economic development, social development and environmental protection are interdependent and mutually reinforcing components of sustainable development. Sustained economic growth is essential to the economic and social development of all countries, in particular developing countries. Through such growth, which should be broadly based so as to benefit all people, countries will be able to improve the standards of living of their people through the eradication of poverty, hunger, disease and illiteracy and the provision of adequate shelter and secure employment for all, and the preservation of the integrity of the environment. Growth can foster development only if its benefits are fully shared. It must therefore also be guided by equity, justice and social and environmental considerations. Development, in turn, must involve measures that improve the human condition and the quality of life itself. Democracy, respect for all human rights and fundamental freedoms, including the right to development, transparent and accountable governance in all sectors of society, as well as effective participation by civil society, are also an essential part of the necessary foundations for the realization of social and people-centred sustainable development.

24. Sustainable development strategies are important mechanisms for enhancing and linking national capacity so as to bring together priorities in social, economic and environmental policies. Hence, special attention must be given to the fulfilment of commitments in the areas set out below, in the framework of an integrated approach towards development, consisting of mutually reinforcing measures to sustain economic growth, as well as to promote social development and environmental protection. Achieving sustainable development cannot be carried out without greater integration at all policy-making levels and at operational levels, including the lowest administrative levels possible. Economic sectors, such as industry, agriculture, energy, transport and tourism, must take responsibility for the impact of their activities on human well-being and the physical environment. In the context of good governance, properly constructed strategies can enhance prospects for economic growth and employment and at the same time protect the

environment. All sectors of society should be involved in their development and implementation, as follows:

(a) By the year 2002, the formulation and elaboration of national strategies for sustainable development that reflect the contributions and responsibilities of all interested parties should be completed in all countries, with assistance provided, as appropriate, through international cooperation, taking into account the special needs of the least developed countries. The efforts of developing countries in effectively implementing national strategies should be supported. Countries that already have national strategies should continue their efforts to enhance and effectively implement them. Assessment of progress achieved and exchange of experience among Governments should be promoted. Local Agenda 21s and other local sustainable development programmes, including youth activities, should also be actively encouraged;

(b) In integrating economic, social and environmental objectives, it is important that a broad package of policy instruments, including regulation, economic instruments, internalization of environmental costs in market prices, environmental and social impact analysis, and information dissemination, be worked out in the light of country-specific conditions to ensure that integrated approaches are effective and cost-efficient. To this end, a transparent and participatory process should be promoted. This will require the involvement of national legislative assemblies, as well as all actors of civil society, including youth and indigenous people and their communities, to complement the efforts of Governments for sustainable development. In particular, the empowerment and the full and equal participation of women in all spheres of society, including participation in the decision-making process, are central to all efforts to achieve such development;

(c) The implementation of policies aiming at sustainable development, including those contained in chapter 3 (Combating poverty) and in chapter 29 (Strengthening the role of workers and their trade unions) of Agenda 21, may enhance the opportunities for job creation, thus helping to achieve the fundamental goal of eradicating poverty.

An enabling international economic climate

25. A mutually supportive balance between the international and the national environment is needed in the pursuit of sustainable development. As a result of globalization, external factors have become critical in determining the success or failure of developing countries in their national efforts. The gap between developed and developing countries points to the continued need for a dynamic and enabling international economic environment supportive of international cooperation, particularly in the fields of finance, technology transfer, debt and trade, if the momentum for global progress towards sustainable development is to be maintained and increased.

26. To foster a dynamic and enabling international economic environment favourable to all countries is in the interest of all countries. Moreover, issues, including environmental issues, that bear on the international economic environment can be approached effectively only through a constructive dialogue and genuine partnership on the basis of mutuality of interests and benefits, taking into account that, in view of the different contributions to global environmental degradation, States have common but differentiated responsibilities.

Eradicating poverty

27. Given the severity of poverty, particularly in developing countries, the eradication of poverty is one of the fundamental goals of the international community and the entire United Nations system, as reflected in Commitment 2 of the Copenhagen Declaration on Social Development,[14] and is essential for sustainable development. Poverty eradication is thus an overriding theme of sustainable development for the coming years. The enormity and complexity of the poverty issue could very well endanger the social fabric, undermine economic development and the environment, and threaten political stability in many countries. To achieve poverty eradication, efforts of individual Governments and international cooperation and assistance should be brought together in a complementary way. Eradication of poverty depends on the full integration of people living in poverty into economic, social and political life. The empowerment of women is a critical factor for the eradication of poverty. Policies that promote such integration to combat poverty, in particular policies for providing basic social services and broader socio-economic development, are effective as well since enhancing the productive capacity of poor people increases both their well-being and that of their communities and societies, and facilitates their participation in resource conservation and environmental protection. The provision of basic social services and food security in an equitable way is a necessary condition for such integration and empowerment. The 20/20 initiative as referred to in the Programme of Action of the World Summit for Social Development[15] is, among other things, a useful means for such integration. However, the five years since the Rio Conference have witnessed an increase in the number of people living in absolute poverty, particularly in developing countries. In this context, there is an urgent need for the timely and full implementation of all the relevant commitments, agreements and targets already agreed upon since the Rio Conference by the international community, including the United Nations system and international financial institutions. Full implementation of the Programme of Action of the World Summit for Social Development is essential. Priority actions include:

(a) Improving access to sustainable livelihoods, entrepreneurial opportunities and productive resources, including land, water, credit, technical and administrative training, and appropriate technology, with particular efforts to broaden the human and social capital basis of societies so as to reach the rural poor and the urban informal sector;

(b) Providing universal access to basic social services, including basic education, health care, nutrition, clean water and sanitation;

(c) Progressively developing, in accordance with the financial and administrative capacities of each society, social protection systems to support those who cannot support themselves, either temporarily or permanently; the aim of social integration is to create a "society for all";

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[14] Report of the World Summit for Social Development, Copenhagen, 6-12 March 1995 (United Nations publication, Sales No. E.96.IV.8), chap. I, resolution 1, annex I.

[15] Ibid., resolution 1, annex II.

(d) Empowering people living in poverty and their organizations by involving them fully in the formulation, implementation and evaluation of strategies and programmes for poverty eradication and community development and by ensuring that these programmes reflect their priorities;

(e) Addressing the disproportionate impact of poverty on women, in particular by removing legislative, policy, administrative and customary barriers to women's equal access to productive resources and services, including access to and control over land and other forms of property, credit, including micro-credit, inheritance, education, information, health care and technology. In this regard, full implementation of the Beijing Platform for Action[16] is essential;

(f) Working together of interested donors and recipients to allocate increased shares of official development assistance to poverty eradication. The 20/20 initiative is an important principle in this respect, as it is based on a mutual commitment among donors and recipients to increasing resources allocated to basic social services;

(g) Intensifying international cooperation to support measures being taken in developing countries to eradicate poverty, to provide basic social protection and services, and to approach poverty eradication efforts in an integral and multidimensional manner.

Changing consumption and production patterns

28. Unsustainable patterns of production and consumption, particularly in the industrialized countries, are identified in Agenda 21 as the major cause of continued deterioration of the global environment. While unsustainable patterns in the industrialized countries continue to aggravate the threats to the environment, there remain huge difficulties for developing countries in meeting basic needs such as food, health care, shelter and education for people. All countries should strive to promote sustainable consumption patterns; developed countries should take the lead in achieving sustainable consumption patterns; developing countries should seek to achieve sustainable consumption patterns in their development process, guaranteeing the provision of basic needs for the poor, while avoiding those unsustainable patterns, particularly in industrialized countries, generally recognized as unduly hazardous to the environment, inefficient and wasteful, in their development processes. This requires enhanced technological and other assistance from industrialized countries. In the follow-up of the implementation of Agenda 21, the review of progress made in achieving sustainable consumption patterns should be given high priority.[17] Consistent with Agenda 21, the development and further elaboration of national policies and strategies, particularly in industrialized countries, are needed to encourage changes in unsustainable consumption and production patterns, while strengthening, as appropriate, international approaches and policies that promote sustainable consumption patterns on the basis of the principle of common but differentiated

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[16] Report of the Fourth World Conference on Women, Beijing, 4-15 September 1995 (United Nations publication, Sales No. E.96.IV.13), chap. I, resolution 1, annex II.

[17] See E/CN.17/1997/19, annex, appendix.

responsibilities, applying the polluter pays principle, and encouraging producer responsibility and greater consumer awareness. Eco-efficiency, cost internalization and product policies are also important tools for making consumption and production patterns more sustainable. Actions in this area should focus on:

(a) Promoting measures to internalize environmental costs and benefits in the price of goods and services, while seeking to avoid potential negative effects for market access by developing countries, particularly with a view to encouraging the use of environmentally preferable products and commodities. Governments should consider shifting the burden of taxation onto unsustainable patterns of production and consumption; it is of vital importance to achieve such an internalization of environmental costs. Such tax reforms should include a socially responsible process of reduction and elimination of subsidies to environmentally harmful activities;

(b) Promoting the role of business in shaping more sustainable patterns of consumption by encouraging, as appropriate, the voluntary publication of environmental and social assessments of its own activities, taking into account specific country conditions, and actions as an agent of change in the market, and actions in its role as a major consumer of goods and services;

(c) Developing core indicators to monitor critical trends in consumption and production patterns, with industrialized countries taking the lead;

(d) Identifying best practices through evaluations of policy measures with respect to their environmental effectiveness, efficiency and implications for social equity, and disseminating such evaluations;

(e) Taking into account the linkages between urbanization and the environmental and developmental effects of consumption and production patterns in cities, thus promoting more sustainable patterns of urbanization;

(f) Promoting international and national programmes for energy and material efficiency with timetables for their implementation, as appropriate. In this regard, attention should be given to studies that propose to improve the efficiency of resource use, including consideration of a 10-fold improvement in resource productivity in industrialized countries in the long term and a possible factor-four increase in industrialized countries in the next two or three decades. Further research is required to study the feasibility of these goals and the practical measures needed for their implementation. Industrialized countries will have a special responsibility and must take the lead in this respect. The Commission on Sustainable Development should consider this initiative in the coming years in exploring policies and measures necessary to implement eco-efficiency and, for this purpose, encourage the relevant bodies to adopt measures aimed at assisting developing countries in improving energy and material efficiency through the promotion of their endogenous capacity-building and economic development with enhanced and effective international support;

(g) Encouraging Governments to take the lead in changing consumption patterns by improving their own environmental performance with action-oriented policies and goals on procurement, the management of public facilities and the further integration of environmental concerns into national policy-making. Governments in developed countries, in particular, should take the lead in this regard;

(h) Encouraging the media, advertising and marketing sectors to help shape sustainable consumption patterns;

(i) Improving the quality of information regarding the environmental impact of products and services and, to that end, encouraging the voluntary and transparent use of eco-labelling;

(j) Promoting measures favouring eco-efficiency; however, developed countries should pay special attention to the needs of developing countries, in particular by encouraging positive impacts, and to the need to avoid negative impacts on export opportunities and on market access for developing countries and, as appropriate, for countries with economies in transition;

(k) Encouraging the development and strengthening of educational programmes to promote sustainable consumption and production patterns;

(l) Encouraging business and industry to develop and apply environmentally sound technology that should aim not only at increasing competitiveness but also at reducing negative environmental impacts;

(m) Giving balanced consideration to both the demand side and the supply side of the economy in matching environmental concerns and economic factors, which could encourage changes in the behaviour of consumers and producers. A number of policy options should be examined; they include regulatory instruments, economic and social incentives and disincentives, facilities and infrastructure, information, education, and technology development and dissemination.

Making trade and environment mutually supportive

29. In order to accelerate economic growth, poverty eradication and environmental protection, particularly in developing countries, there is a need to establish macroeconomic conditions in both developed and developing countries that favour the development of instruments and structures enabling all countries, in particular developing countries, to benefit from globalization. International cooperation and support for capacity-building in trade, environment and development should be strengthened through renewed system-wide efforts, and with greater responsiveness to sustainable development objectives, by the United Nations, the World Trade Organization and the Bretton Woods institutions, as well as by national Governments. There should be a balanced and integrated approach to trade and sustainable development, based on a combination of trade liberalization, economic development and environmental protection. Trade obstacles should be removed with a view to contributing to the achieving of more efficient use of the earth's natural resources in both economic and environmental terms. Trade liberalization should be accompanied by environmental and resource management policies in order to realize its full potential contribution to improved environmental protection and the promotion of sustainable development through the more efficient allocation and use of resources. The multilateral trading system should have the capacity to further integrate environmental considerations and enhance its contribution to sustainable development, without undermining its open, equitable and non-discriminatory character. The special and differential treatment for developing countries, especially the least developed countries, and the other commitments of the Uruguay Round of

multilateral trade negotiations[18] should be fully implemented in order to enable those countries to benefit from the international trading system, while conserving the environment. There is a need for continuing the elimination of discriminatory and protectionist practices in international trade relations, which will have the effect of improving access for the exports of developing countries. This will also facilitate the full integration of economies in transition into the world economy. In order to make trade, environment and development mutually supportive, measures need to be taken to ensure transparency in the use of trade measures related to the environment, and should address the root causes of environmental degradation so as not to result in disguised barriers to trade. Account should be taken of the fact that environmental standards valid for developed countries may have unwarranted social and economic costs in other countries, in particular developing countries. International cooperation is needed and unilateralism should be avoided. The following actions are required:

(a) There should be timely and full implementation of the results of the Uruguay Round of multilateral trade negotiations and full use of the Comprehensive and Integrated World Trade Organization Plan of Action for the Least Developed Countries;[19]

(b) An open, non-discriminatory, rule-based, equitable, secure, transparent and predictable multilateral trading system should be promoted. In this context, effective measures are called for to achieve the complete integration of developing countries and countries with economies in transition into the world economy and the new international trading system. In this connection, there is a need to promote the universality of the World Trade Organization and to facilitate the admission to membership in that organization, in a mutually beneficial way, of developing countries and countries with economies in transition applying for membership. Actions should be taken to maximize the opportunities and to minimize the difficulties of developing countries, including the net food-importing ones, especially the least developed countries, and of countries with economies in transition, in adjusting to the changes introduced by the Uruguay Round. Decisions on further liberalization of trade should take into account effects on sustainable development and should be consistent with an open, rule-based, non-discriminatory, equitable, secure and transparent multilateral trading system. The relationship between multilateral environmental agreements and the World Trade Organization rules should be clarified;

(c) Implementation of environmental measures should not result in disguised barriers to trade;

(d) Within the framework of Agenda 21, trade rules and environmental principles should interact harmoniously;

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[18] See Legal Instruments Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations done at Marrakesh on 15 April 1994 (GATT secretariat publication, Sales No. GATT/1994-7), vol. I.

[19] Adopted by the Ministerial Conference of the World Trade Organization held at Singapore in December 1996 (WT/MIN(96)/14).

(e) Further analysis of the environmental effects of the international transport of goods is warranted;

(f) Cooperation and coordination between the United Nations Conference on Trade and Development, the United Nations Industrial Development Organization, the World Trade Organization, the United Nations Environment Programme and other relevant institutions should be strengthened on various issues, including (i) the role of positive measures in multilateral environmental agreements as part of a package of measures including, in certain cases, trade measures; (ii) the special conditions and needs of small and medium-sized enterprises in the trade and environment interface; (iii) trade and environment issues at the regional and subregional levels, including within the context of regional economic and trade as well as environmental agreements;

(g) Cooperation and coordination between the United Nations Conference on Trade and Development and other relevant bodies within their existing respective mandates should be enhanced, inter alia, on environment and sustainable development issues. Without prejudice to the clear understanding in the World Trade Organization that future negotiations, if any, regarding a multilateral agreement on investment will take place only after an explicit consensus decision, future agreements on investments should take into account the objectives of sustainable development and, when developing countries are parties to these agreements, special attention should be given to their needs for investment;

(h) National Governments should make every effort to ensure policy coordination on trade, environment and development at the national level in support of sustainable development;

(i) There is a need for the World Trade Organization, the United Nations Environment Programme and the United Nations Conference on Trade and Development to consider ways to make trade and environment mutually supportive, including through due respect for the objectives and principles of the multilateral trading system and for the provisions of multilateral environmental agreements. Such considerations should be consistent with an open, rule-based, non-discriminatory, equitable, secure and transparent multilateral trading system.

Population

30. The impact of the relationship among economic growth, poverty, employment, environment and sustainable development has become a major concern. There is a need to recognize the critical linkages between demographic trends and factors and sustainable development. The current decline in population growth rates must be further promoted through national and international policies that promote economic development, social development, environmental protection, and poverty eradication, particularly the further expansion of basic education, with full and equal access for girls and women, and health care, including reproductive health care, including both

family planning and sexual health, consistent with the report of the International Conference on Population and Development.[20]

Health

31. The goals of sustainable development cannot be achieved when a high proportion of the population is afflicted with debilitating illnesses. An overriding goal for the future is to implement the Health for All strategy[21] and to enable all people, particularly the world's poor, to achieve a higher level of health and well-being, and to improve their economic productivity and social potential. Protecting children from environmental health threats and infectious disease is particularly urgent since children are more susceptible than adults to those threats. Top priority should be attached to supporting the efforts of countries, particularly developing countries, and international organizations to eradicate the major infectious diseases, especially malaria, which is on the increase, to improve and expand basic health and sanitation services, and to provide safe drinking water. It is also important to reduce indigenous cases of vaccine-preventable diseases through the promotion of widespread immunization programmes, promote accelerated research and vaccine development and reduce the transmission of other major infectious diseases, such as dengue fever, tuberculosis and human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS). Given the severe and irreversible health effects of lead poisoning, particularly on children, it is important to accelerate the process of eliminating unsafe uses of lead, including the use of lead in gasoline worldwide, in light of country-specific conditions and with enhanced international support and assistance to developing countries, particularly through the timely provision of technical and financial assistance and the promotion of endogenous capacity-building. Strategies at the regional, national and local levels for reducing the potential risk due to ambient and indoor air pollution should be developed, bearing in mind their serious impacts on human health, including strategies to make parents, families and communities aware of the adverse environmental health impacts of tobacco. The clear linkage between health and the environment needs to be emphasized and the lack of information on the impact of environmental pollution on health should be addressed. Health issues should be fully integrated into national and subnational sustainable development plans and should be incorporated into project and programme development as a component of environmental impact assessments. Important to efforts at national levels is international cooperation in disease prevention, early warning, surveillance, reporting, training and research, and treatment.

Sustainable human settlements

32. Sustainable human settlements development is essential to sustainable development. The need to intensify efforts and cooperation to improve living conditions in the cities, towns, villages and rural areas throughout the world

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[20] Report of the International Conference on Population and Development, Cairo, 5-13 September 1994 (United Nations publication, Sales No. E.95.XIII.18).

[21] See World Health Organization, Primary Health Care: Report of the International Conference on Primary Health Care, Alma-Ata, Union of Soviet Socialist Republics, 6-12 September 1978 (Geneva, 1978).

is recognized. Approximately half the world's population already lives in urban settlements, and by early in the next century the majority - more than 5 billion people - will be urban residents. Urban problems are concerns common to both developed and developing countries, although urbanization is occurring most rapidly in developing countries. Urbanization creates both challenges and opportunities. Global urbanization is a cross-sectoral phenomenon that has an impact on all aspects of sustainable development. Urgent action is needed to implement fully the commitments made at the United Nations Conference on Human Settlements (Habitat II) consistent with its report,[22] and in Agenda 21. New and additional financial resources from various sources are necessary to achieve the goals of adequate shelter for all and sustainable human settlements development in an urbanizing world. Transfer of expertise and technology, capacity-building, decentralization of authority through, inter alia, strengthening of local capacity and private-public partnerships to improve the provision and environmentally sound management of infrastructure and social services should be accelerated to achieve more sustainable human settlements development. Local Agenda 21 programmes should also be actively encouraged. Global targets could be established by the Commission on Sustainable Development to promote local Agenda 21 campaigns and to deal with obstacles to local Agenda 21 initiatives.

B. Sectors and issues

33. The present section identifies a number of specific areas that are of widespread concern since failure to reverse current trends in these areas, notably in resource degradation, will have potentially disastrous effects on social and economic development, on human health and on environmental protection for all countries, particularly developing countries. All sectors covered by Agenda 21 are equally important and thus deserve attention by the international community on an equal footing. The need for integration is important in all sectors, including the areas of energy and transport because of the adverse effects that developments in those areas can have on human health and ecosystems; the areas of agriculture and water use, where inadequate land-use planning, poor water management and inappropriate technology can result in the degradation of natural resources and human impoverishment and where drought and desertification can result in land degradation and soil loss; and the area of management of marine resources, where competitive overexploitation can damage the resource base, food supplies and the livelihood of fishing communities, as well as the environment. The recommendations made in each of the sectors take into account the need for international cooperation in support of national efforts, within the context of the principles of the United Nations Conference on Environment and Development, including, inter alia, the principle of common but differentiated responsibilities. It is likewise understood that these recommendations do not in any way prejudice the work accomplished under legally binding conventions, where they exist, concerning these sectors.

Fresh water

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[22] Report of the United Nations Conference on Human Settlements (Habitat II), Istanbul, 3-14 June 1996 (A/CONF.165/14), chap. I, resolution 1, annexes I and II.

34. Water resources are essential for satisfying basic human needs, health and food production, and the preservation of ecosystems, as well as for economic and social development in general. It is a matter of urgent concern that more than one fifth of all people still do not have access to safe drinking water and more than one half of humanity lacks adequate sanitation. From the perspective of developing countries, fresh water is a priority and a basic need, especially taking into account that in many developing countries fresh water is not readily available for all segments of the population, inter alia, owing to lack of adequate infrastructure and capacity, water scarcity, and technical and financial constraints. Moreover, fresh water is also crucial for developing countries in order to satisfy the basic needs of their population in the areas of agricultural irrigation, industrial development, hydroelectric generation, and so forth. In view of the growing demands on water, which is a finite resource, it will become a major limiting factor in socio-economic development unless early action is taken. There is growing concern regarding the increasing stress on water supplies caused by unsustainable use patterns, affecting both water quality and quantity, and the widespread lack of access to safe water supply and suitable sanitation in many developing countries. Because the commitments of the International Drinking Water Supply and Sanitation Decade of the 1980s have not been fully met, there is still a need to ensure the optimal use and protection of all fresh-water resources, so that the needs of everyone on this planet, including access to safe drinking water and sanitation, can be met. This calls for the highest priority to be given to the serious fresh-water problems facing many regions, especially in the developing world. There is an urgent need:

(a) To assign high priority, in accordance with specific national needs and conditions, to the formulation and implementation of policies and programmes for integrated watershed management, including issues related to pollution and waste, the interrelationship between water and land, including mountains, forests, upstream and downstream users, estuarine environments, biodiversity and the preservation of aquatic ecosystems, wetlands, climate and land degradation and desertification, recognizing that subnational, national and regional approaches to fresh-water protection and consumption following a watershed basin or river basin approach offer a useful model for the protection of fresh-water supplies;

(b) To strengthen regional and international cooperation for technological transfer and the financing of integrated water resources programmes and projects, in particular those designed to increase access to safe water supply and sanitation;

(c) To ensure the continued participation of local communities, and women in particular, in the management of water resources development and use;

(d) To provide an enabling national and international environment that encourages investments from public and private sources to improve water supply and sanitation services, especially in fast growing urban and peri-urban areas, as well as in poor rural communities in developing countries; and for the international community to adopt and implement commitments to support the efforts to assist developing countries in achieving access to safe drinking water and sanitation for all;

(e) To recognize water as a social and economic good with a vital role in the satisfaction of basic human needs, food security, poverty alleviation and the protection of ecosystems. Economic valuation of water should be seen

within the context of its social and economic implications, reflecting the importance of meeting basic needs. Consideration should be given to the gradual implementation of pricing policies that are geared towards cost recovery and the equitable and efficient allocation of water, including the promotion of water conservation, in developed countries; such policies could also be considered in developing countries when they reach an appropriate stage in their development, so as to promote the harmonious management and development of scarce water resources and generate financial resources for investment in new water supply and treatment facilities. Such strategies should also include programmes assigned to minimize wasteful consumption of water;

(f) To strengthen the capability of Governments and international institutions to collect and manage information, including scientific, social and environmental data, in order to facilitate the integrated assessment and management of water resources, and foster regional and international cooperation for information dissemination and exchange through cooperative approaches among United Nations institutions, including the United Nations Environment Programme, and centres for environmental excellence. In this regard, technical assistance to developing countries will continue to be important;

(g) For the international community to give support to the efforts of developing countries, with their limited resources, to shift to higher-value, less water-intensive modes of agricultural and industrial production and to develop the educational and informational infrastructure necessary to improve the skills of the labour force required for the economic transformation that needs to take place if use of fresh-water resources is to be sustainable. International support for the integrated development of water resources in developing countries, and appropriate innovative initiatives and approaches at the bilateral and regional levels are also required;

(h) To encourage watercourse States to develop international watercourses with a view to attaining sustainable utilization and appropriate protection thereof and benefits therefrom, taking into account the interests of the watercourse States concerned.

35. Considering the urgent need for action in the field of fresh water, and building on existing principles and instruments, arrangements, programmes of action and customary uses of water, Governments call for a dialogue under the aegis of the Commission on Sustainable Development, beginning at its sixth session, aimed at building a consensus on the necessary actions, and in particular, on the means of implementation and on tangible results, in order to consider initiating a strategic approach for the implementation of all aspects of the sustainable use of fresh water for social and economic purposes, including, inter alia, safe drinking water and sanitation, water for irrigation, recycling, and waste-water management, and the important role fresh water plays in natural ecosystems. This intergovernmental process will be fully fruitful only if there is a proved commitment by the international community to the provision of new and additional financial resources for the goals of this initiative.

Oceans and seas

36. Progress has been achieved since the United Nations Conference on Environment and Development in the negotiation of agreements and voluntary

instruments for improving the conservation and management of fishery resources and for the protection of the marine environment. Furthermore, progress has been made in the conservation and management of specific fishery stocks for the purpose of securing the sustainable utilization of these resources. Despite this, the decline of many fish stocks, high levels of discards, and rising marine pollution continue. Governments should take full advantage of the challenge and opportunity presented by the International Year of the Ocean in 1998. There is a need to continue to improve decision-making at the national, regional and global levels. To address the need for improving global decision-making on the marine environment, there is an urgent need for Governments to implement decision 4/15 of the Commission on Sustainable Development,[23] in which the Commission, inter alia, called for a periodic intergovernmental review by the Commission of all aspects of the marine environment and its related issues, as described in chapter 17 of Agenda 21, and for which the overall legal framework was provided by the United Nations Convention on the Law of the Sea. There is a need for concerted action by all countries and for improved cooperation to assist developing countries in implementing the relevant agreements and instruments in order that they may participate effectively in the sustainable use, conservation and management of their fishery resources, as provided for in the Convention and other international legal instruments, and achieve integrated coastal zone management. In that context, there is an urgent need for:

(a) All Governments to ratify or to accede to the relevant agreements as soon as possible and to implement effectively such agreements as well as relevant voluntary instruments;

(b) All Governments to implement General Assembly resolution 51/189 of 16 December 1996, including the strengthening of institutional links to be established between the relevant intergovernmental mechanisms involved in the development and implementation of integrated coastal zone management. Following progress on the United Nations Convention on the Law of the Sea, and bearing in mind Principle 13 of the Rio Declaration on Environment and Development, there is a need to strengthen the implementation of existing international and regional agreements on marine pollution, with a view in particular to ensuring better contingency planning, response, and liability and compensation mechanisms;

(c) Better identification of priorities for action at the global level to promote the conservation and sustainable use of the marine environment, as well as better means for integrating such action;

(d) Further international cooperation to support the strengthening, where needed, of regional and subregional agreements for the protection and sustainable use of the oceans and seas;

(e) Governments to prevent or eliminate overfishing and excess fishing capacity through the adoption of management measures and mechanisms to ensure the sustainable management and utilization of fishery resources and to undertake programmes of work to achieve the reduction and elimination of wasteful fishing practices, wherever they may occur, especially in relation to large-scale industrialized fishing. The emphasis given by the Commission on

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[23] See Official Records of the Economic and Social Council, 1996, Supplement No. 8 (E/1996/28), chap. I, sect. C, decision 4/15, para. 45 (a).

Sustainable Development at its fourth session to the importance of effective conservation and management of fish stocks, and in particular to eliminating overfishing, in order to identify specific steps at national or regional levels to prevent or eliminate excess fishing capacity, will need to be carried forward in all appropriate international forums including, in particular, the Committee on Fisheries of the Food and Agriculture Organization of the United Nations;

(f) Governments to consider the positive and negative impact of subsidies on the conservation and management of fisheries through national, regional and appropriate international organizations and, based on these analyses, to consider appropriate action;

(g) Governments to take actions, individually and through their participation in competent global and regional forums, to improve the quality and quantity of scientific data as a basis for effective decisions related to the protection of the marine environment and the conservation and management of marine living resources; in this regard, greater international cooperation is required to assist developing countries, in particular small island developing States, to operationalize data networks and clearing houses for information-sharing on oceans. In this context, particular emphasis must be placed on the collection of biological and other fisheries-related information and the resources for its collation, analysis and dissemination.

Forests

37. The management, conservation and sustainable development of all types of forests are a crucial factor in economic and social development, in environmental protection and in the planet's life-support system. Forests are one of the major reservoirs of biological diversity; they act as carbon sinks and reservoirs; and they are a significant source of renewable energy, particularly in the least developed countries. Forests are an integral part of sustainable development and are essential to many indigenous people and other forest-dependent people practising traditional lifestyles, forest owners and local communities, many of whom possess important traditional forest-related knowledge.

38. Since the adoption of the Forest Principles at the Rio Conference, tangible progress has been made in sustainable forest management at the national, subregional, regional and international levels and in the promotion of international cooperation on forests. The proposals for action contained in the report of the Ad Hoc Intergovernmental Panel on Forests on its fourth session,[24] which were endorsed by the Commission on Sustainable Development at its fifth session,[25]represent significant progress and consensus on a wide range of forest issues.

39. To maintain the momentum generated by the Intergovernmental Panel process and to facilitate and encourage the holistic, integrated and balanced intergovernmental policy dialogue on all types of forests in the future, which continues to be an open, transparent and participatory process, requires a

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[24] E/CN.17/1997/12.

[25] See Official Records of the Economic and Social Council, 1997, Supplement No. 9 (E/1997/29).

long-term political commitment to sustainable forest management worldwide. Against this background, there is an urgent need for:

(a) Countries and international organizations and institutions to implement the proposals for action agreed by the Intergovernmental Panel, in an expeditious and effective manner, and in collaboration and through effective partnership with all interested parties, including major groups, in particular indigenous people and local communities;

(b) Countries to develop national forest programmes in accordance with their respective national conditions, objectives and priorities;

(c) Enhanced international cooperation to implement the Intergovernmental Panel's proposals for action directed towards the management, conservation and sustainable development of all types of forests, including provision for financial resources, capacity-building, research and the transfer of technology;

(d) Further clarification of all issues arising from the programme elements of the Intergovernmental Panel process;

(e) International institutions and organizations to continue their work and to undertake further coordination and explore means for collaboration in the informal, high-level Inter-agency Task Force on Forests, focusing on the implementation of the Intergovernmental Panel's proposals for action, in accordance with their respective mandates and comparative advantage;

(f) Countries to provide consistent guidance to the governing bodies of relevant international institutions and instruments with respect to taking efficient and effective measures, as well as to coordinating their forest-related work at all levels, in respect of incorporating the Intergovernmental Panel's proposals for action into their work programmes and under existing agreements and arrangements.

40. To help achieve this, it is decided to continue the intergovernmental policy dialogue on forests through the establishment of an ad hoc open-ended Intergovernmental Forum on Forests under the aegis of the Commission on Sustainable Development to work in an open, transparent and participatory manner, with a focused and time-limited mandate, and charged with, inter alia:

(a) Promoting and facilitating the implementation of the Intergovernmental Panel's proposals for action;

(b) Reviewing, monitoring and reporting on progress in the management, conservation and sustainable development of all types of forests;

(c) Considering matters left pending as regards the programme elements of the Intergovernmental Panel, in particular trade and environment in relation to forest products and services, transfer of technology and the need for financial resources.

The Forum should also identify the possible elements of and work towards consensus on international arrangements and mechanisms, for example, a legally binding instrument. The Forum will report on its work to the Commission on Sustainable Development in 1999. Based on that report, and depending on the decision of the Commission at its eighth session, the Forum will engage in

further action on establishing an intergovernmental negotiation process on new arrangements and mechanisms or a legally binding instrument on all types of forests.

41. The Forum should convene as soon as possible to further elaborate its terms of reference and decide on organizational matters. It should be serviced by a small secretariat within the Department for Policy Coordination and Sustainable Development of the United Nations Secretariat supported by voluntary extrabudgetary contributions from Governments and international organizations.

Energy

42. Energy is essential to economic and social development and improved quality of life. However, sustainable patterns of production, distribution and use of energy are crucial. Fossil fuels (coal, oil and natural gas) will continue to dominate the energy supply situation for many years to come in most developed and developing countries. What is required then is to reduce the environmental impact of their continued development, and to reduce local health hazards and environmental pollution through enhanced international cooperation, notably in the provision of concessional finance for capacity development and transfer of the relevant technology, and through appropriate national action.

43. In developing countries, sharp increases in energy services are required to improve the standard of living of their growing populations. The increase in the level of energy services would have a beneficial impact on poverty eradication by increasing employment opportunities and improving transportation, health and education. Many developing countries, in particular the least developed, face the urgent need to provide adequate modern energy services, especially to billions of people in rural areas. This requires significant financial, human and technical resources and a broad-based mix of energy sources.

44. The objectives envisaged in this section should reflect the need for equity, adequate energy supplies and increasing energy consumption in developing countries and should take into account the situation of countries that are highly dependent on income generated from the production, processing and export, and/or consumption, of fossil fuels and that have serious difficulties in switching to alternative sources of energy, and the situation of countries highly vulnerable to the adverse effects of climate change.

45. Advances towards sustainable energy use are taking place and all parties can benefit from progress made in other countries. It is also necessary to ensure international cooperation for promoting energy conservation and improvement of energy efficiency, the use of renewable energy and research, and the development and dissemination of innovative energy-related technology.

46. Therefore there is a need for:

(a) A movement towards sustainable patterns of production, distribution and use of energy. To advance this work at the intergovernmental level, the Commission on Sustainable Development will discuss energy issues at its ninth session. Noting the vital role of energy in the continuation of sustained economic growth, especially for developing countries, be they importers or

suppliers of energy, and recognizing the complexities and interdependencies inherent in addressing energy issues within the context of sustainable development, preparations for this session should be initiated at the seventh session and should utilize an open-ended intergovernmental group of experts on energy and sustainable development to be held in conjunction with inter-sessional meetings of the eighth and ninth sessions of the Commission. In line with the objectives of Agenda 21, the ninth session of the Commission should contribute to a sustainable energy future for all;

(b) Evolving concrete measures to strengthen international cooperation in order to assist developing countries in their domestic efforts to provide adequate modern energy services, especially electricity, to all sections of their population, particularly in rural areas, in an environmentally sound manner;

(c) Countries to promote policies and plans, bearing in mind the specific needs and priorities of developing countries, that take into account the economic, social and environmental aspects of the production, distribution and use of energy, including the use of lower-pollutant sources of energy such as natural gas;

(d) Evolving commitments for the transfer of relevant technology, including time-bound commitments, as appropriate, to developing countries and economies in transition so as to enable them to increase the use of renewable energy sources and cleaner fossil fuels and to improve efficiency in energy production, distribution and use. Countries need to systematically increase the use of renewable energy sources according to their specific social, economic, natural, geographical and climatic conditions and cleaner fuel technologies, including fossil fuel technologies, and to improve efficiency in energy production, distribution and use and in other industrial production processes that are intensive users of energy;

(e) Promoting efforts in research on and development and use of renewable energy technologies at the international and national levels;

(f) In the context of fossil fuels, encouraging further research, development, and the application and transfer of technology of a cleaner and more efficient nature, through effective international support;

(g) Encouraging Governments and the private sector to consider appropriate ways to gradually promote environmental cost internalization so as to achieve more sustainable use of energy, taking fully into account the economic, social and environmental conditions of all countries, in particular developing countries. In this regard, the international community should cooperate to minimize the possible adverse impacts on the development process of developing countries resulting from the implementation of those policies and measures. There is also a need to encourage the reduction and the gradual elimination of subsidies for energy production and consumption that inhibit sustainable development. Such policies should take fully into account the specific needs and conditions of developing countries, particularly least developed countries, as reflected in the special and differential treatment accorded them in the Uruguay Round of multilateral trade negotiations Agreement on Subsidies and Countervailing Measures;

(h) Encouraging better coordination on the issue of energy within the United Nations system, under the guidance of the General Assembly and taking into account the coordinating role of the Economic and Social Council.

Transport

47. The transport sector and mobility in general have an essential and positive role to play in economic and social development, and transportation needs will undoubtedly increase. Over the next twenty years, transportation is expected to be the major driving force behind a growing world demand for energy. The transport sector is the largest end-user of energy in developed countries and the fastest growing one in most developing countries. Current patterns of transportation with their dominant patterns of energy use are not sustainable and on the basis of present trends may compound the environmental problems the world is facing and the health impacts referred to in paragraph 31 above. There is a need for:

(a) The promotion of integrated transport policies that consider alternative approaches to meeting commercial and private mobility needs and improve performance in the transport sector at the national, regional and global levels, and particularly a need to encourage international cooperation in the transfer of environmentally sound technologies in the transport sector and implementation of appropriate training programmes in accordance with national programmes and priorities;

(b) The integration of land-use and urban, peri-urban and rural transport planning, taking into account the need to protect ecosystems;

(c) The adoption and promotion, as appropriate, of measures to mitigate the negative impact of transportation on the environment, including measures to improve efficiency in the transportation sector;

(d) The use of a broad spectrum of policy instruments to improve energy efficiency and efficiency standards in transportation and related sectors;

(e) The continuation of studies in the appropriate forums, including the International Civil Aviation Organization, on the use of economic instruments for the mitigation of the negative environmental impact of aviation in the context of sustainable development;

(f) Accelerating the phasing-out of the use of leaded gasoline as soon as possible, in pursuit of the objectives of reducing the severe health impacts of human exposure to lead. In this regard, technological and economic assistance should continue to be provided to developing countries in order to enable them to make such a transition;

(g) The promotion of voluntary guidelines for environmentally friendly transport, and actions for reducing vehicle emissions of carbon dioxide, carbon monoxide, nitrogen oxides, particulate matter and volatile organic compounds, as soon as possible;

(h) Partnerships at the national level, involving Governments, local authorities, non-governmental organizations and the private sector, for strengthening transport infrastructures and developing innovative mass transport schemes.

Atmosphere

48. Ensuring that the global climate and atmosphere are not further damaged, with irreversible consequences for future generations, requires political will and concerted efforts by the international community in accordance with the principles enshrined in the United Nations Framework Convention on Climate Change. Under the Convention, some first steps have been taken to deal with the global problem of climate change. Despite the adoption of the Convention, the emission and concentration of greenhouse gases continue to rise, even as scientific evidence assembled by the Intergovernmental Panel on Climate Change and other relevant bodies continues to diminish the uncertainties and points ever more strongly to the severe risk of global climate change. So far, insufficient progress has been made by many developed countries in meeting their aim to return greenhouse gas emissions to 1990 levels by the year 2000. It is recognized as one critical element of the Berlin Mandate[26] that the commitments set out under article 4, paragraph 2 (a) and (b), of the Convention are inadequate and that there is therefore a need to strengthen them. It is most important that the Conference of the Parties to the Convention, at its third session, to be held at Kyoto, Japan in December 1997, adopt a protocol or other legal instrument that fully encompasses the Berlin Mandate. The Geneva Ministerial Declaration,[27] which was noted without formal adoption, but which received majority support among ministers and other heads of delegation attending the second session of the Conference of the Parties, also called for, inter alia, the acceleration of negotiations on the text of a legally binding protocol or other legal instrument.

49. At the present nineteenth special session of the General Assembly, the international community has confirmed its recognition of the problem of climate change as one of the biggest challenges facing the world in the next century. The leaders of many countries have stressed the seriousness of this problem in their statements to the Assembly, and have outlined the actions they had in hand to respond to the challenge, both in their own countries and internationally.

50. The ultimate goal that all countries share is to achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. This requires efficient and cost-effective policies and measures that will be sufficient to result in a significant reduction in emissions. At the present session, countries reviewed the status of the preparations for the third session of the Conference of the Parties to the United Nations Framework Convention on Climate Change. All agreed that a satisfactory result was vital.

51. The position of many countries with respect to these negotiations is still evolving, and it was agreed that it would not be appropriate to seek to predetermine the results; however, useful discussions on evolving positions took place.

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[26] FCCC/CP/1995/7/Add.1, sect. I, decision 1/CP.1.

[27] Report of the Conference of the Parties to the United Nations Framework Convention on Climate Change on its second session, Geneva, 8-19 July 1996 (FCCC/CP/1996/15/Add.1), annex.

52. There is already widespread but not universal agreement that it will be necessary to consider legally binding, meaningful, realistic and equitable targets for countries listed in annex I to the Convention that will result in significant reductions in greenhouse gas emissions within specified time frames, such as 2005, 2010 and 2020. In addition to establishing targets, there is also widespread agreement that it will be necessary to consider ways and means of achieving them and to take into account the economic, adverse environmental and other effects of such response measures on all countries, particularly developing countries.

53. International cooperation in the implementation of chapter 9 of Agenda 21, in particular in the transfer of technology to and capacity-building in developing countries, is also essential to promote the effective implementation of the United Nations Framework Convention on Climate Change.

54. There is also a need to strengthen systematic observational networks so as to identify the possible onset and distribution of climate change and assess potential impacts, particularly at the regional level.

55. The ozone layer continues to be severely depleted and the Montreal Protocol on Substances that Deplete the Ozone Layer[28] needs to be strengthened. The Copenhagen Amendment to the Protocol needs to be ratified. The recent successful conclusion of the replenishment negotiations with respect to the Montreal Protocol Multilateral Fund is welcomed. This has made available funds for, among other things, earlier phase-out of ozone-depleting substances, including methyl bromide, in developing countries. Future replenishment should also be adequate to ensure timely implementation of the Montreal Protocol. An increased focus on capacity-building programmes in developing countries within multilateral funds is also needed, as well as the implementation of effective measures against illegal trade in ozone-depleting substances.

56. Rising levels of transboundary air pollution should be countered, including through appropriate regional cooperation to reduce pollution levels.

Toxic chemicals

57. The sound management of chemicals is essential to sustainable development and is fundamental to human health and environmental protection. All those responsible for chemicals throughout their life cycle bear the responsibility for achieving this goal. Substantial progress on the sound management of chemicals has been made since the United Nations Conference on Environment and Development, in particular through the establishment of the Intergovernmental Forum on Chemical Safety and the Inter-Organizational Programme for the Sound Management of Chemicals. In addition, domestic regulations have been complemented by the Code of Ethics on the International Trade in Chemicals and by voluntary industry initiatives, such as Responsible Care. Despite substantial progress, a number of chemicals continue to pose significant threats to local, regional and global ecosystems and to human health. Since the United Nations Conference on Environment and Development, there has been an increased understanding of the serious damage that certain toxic chemicals can cause to human health and the environment. Much remains to be done and the environmentally sound management of chemicals should

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[28] United Nations, Treaty Series, vol. 1522, No. 26369. (Forthcoming.)

continue to be an important issue well beyond 2000. Particular attention should also be given to cooperation in the development and transfer of technology of safe substitutes and in the development of capacity for the production of such substitutes. The decision concerning the sound management of chemicals adopted by the Governing Council of the United Nations Environment Programme at its nineteenth session[29] should be implemented in accordance with the agreed timetables for negotiations on the conventions relating to prior informed consent and persistent organic pollutants. It is noted that inorganic chemicals possess roles and behaviour that are distinct from organic chemicals.

Hazardous wastes

58. Substantial progress has been made in the implementation of the Basel Convention,[30] the Bamako Convention,[31] the Fourth Lomé Convention[32] and other regional conventions, although more remains to be done. Important initiatives aimed at promoting the environmentally sound management of hazardous wastes under the Basel Convention, include (a) activities undertaken to prevent illegal traffic in hazardous wastes; (b) the establishment of regional centres for training and technology transfer regarding hazardous waste minimization and management; and (c) the treatment and disposal of hazardous wastes as close as possible to their source of origin. These initiatives should be further developed. It is also important and urgent that work under the Basel Convention be completed to define which hazardous wastes are controlled under the Convention and to negotiate, adopt and implement a protocol on liability and compensation for damage resulting from the transboundary movement and disposal of hazardous wastes. Land contaminated by the disposal of hazardous wastes needs to be identified and remedial actions put in hand. Integrated management solutions are also required to minimize urban and industrial waste generation and to promote recycling and reuse.

Radioactive wastes

59. Radioactive wastes can have very serious environmental and human health impacts over long periods of time. It is therefore essential that they be managed in a safe and responsible way. The storage, transportation, transboundary movement and disposal of radioactive wastes should be guided by all the principles of the Rio Declaration on Environment and Development and by Agenda 21. States that generate radioactive wastes have a responsibility to ensure their safe storage and disposal. In general, radioactive wastes

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[29] Official Records of the General Assembly, Fifty-second Session, Supplement No. 25 (A/52/25), annex, decision 19/13.

[30] United Nations, Treaty Series, vol. 1673, No. 28911 (forthcoming).

[31] Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, International Legal Materials, vol. 30, No. 3 (May 1991), p. 775, and vol. 31, No. 1 (January 1992), p. 164.

[32] See The Courier Africa-Caribbean-Pacific-European Community, No. 120 (March-April 1990).

should be disposed of in the territory of the State in which they are generated as far as is compatible with the safety of the management of such material. Each country has the responsibility of ensuring that radioactive wastes that fall within its jurisdiction are managed properly in accordance with internationally accepted principles, taking fully into account any transboundary effects. The international community should make all efforts to prohibit the export of radioactive wastes to those countries that do not have appropriate waste treatment and storage facilities. The international community recognizes that regional arrangements or jointly used facilities might be appropriate for the disposal of such wastes in certain circumstances. The management of radioactive wastes[33] should be undertaken in a manner consistent with international law, including the provisions of relevant international and regional conventions, and with internationally accepted standards. It is important to intensify safety measures with regard to radioactive wastes. States, in cooperation with relevant international organizations, where appropriate, should not promote or allow the storage or disposal of high-level, intermediate-level or low-level radioactive wastes near the marine environment unless they determine that scientific evidence, consistent with the applicable internationally agreed principles and guidelines, shows that such storage or disposal poses no unacceptable risk to people or the marine environment and does not interfere with other legitimate uses of the sea. In the process of the consideration of that evidence, appropriate application of the precautionary approach principle should be made. Further action is needed by the international community to address the need for enhancing awareness of the importance of the safe management of radioactive wastes, and to ensure the prevention of incidents and accidents involving the uncontrolled release of such wastes.

60. One of the main recommendations of Agenda 21 and of the Commission on Sustainable Development at its second session in this area was to support the ongoing efforts of the International Atomic Energy Agency, the International Maritime Organization and other relevant international organizations. The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management currently being negotiated under the auspices of the Agency is now close to completion. It will provide a comprehensive codification of international law and a guide to best practices in this area. It will rightly be based on all the principles of best practice for this subject that have evolved in the international community, including the principle that, in general, radioactive wastes should be disposed of in the State in which they were generated as far as is compatible with the safety of the management of such material. Governments should finalize this text and are urged to ratify and implement it as soon as possible so as to further improve practice and strengthen safety in this area. Transportation of irradiated nuclear fuel and high-level waste by sea should be guided by the INF Code, which should be considered for development into a mandatory instrument. The issue of the potential transboundary environmental effects of activities related to the management of radioactive wastes and the question of prior notification, relevant information and consultation with States that could potentially be affected by such effects, should be further addressed within the appropriate forums.

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[33] Where "management" appears in the section on radioactive wastes, it is defined as handling, treatment, storage, transportation, including transboundary movement, and final disposal of such wastes.

61. Increased global and regional cooperation, including exchange of information and experience and transfer of appropriate technologies, is needed to improve the management of radioactive wastes. There is a need to support the clean-up of sites contaminated as a result of all types of nuclear activity and to conduct health studies in the regions around those sites, as appropriate, with a view to identifying where health treatment may be needed and should be provided. Technical assistance should be provided to developing countries, recognizing the special needs of small island developing States in particular, to enable them to develop or improve procedures for the management and safe disposal of radioactive wastes deriving from the use of radionuclides in medicine, research and industry.

Land and sustainable agriculture

62. Land degradation and soil loss threaten the livelihood of millions of people and future food security, with implications for water resources and the conservation of biodiversity. There is an urgent need to define ways to combat or reverse the worldwide accelerating trend of soil degradation, using an ecosystem approach, taking into account the needs of populations living in mountain ecosystems and recognizing the multiple functions of agriculture. The greatest challenge for humanity is to protect and sustainably manage the natural resource base on which food and fibre production depend, while feeding and housing a population that is still growing. The international community has recognized the need for an integrated approach to the protection and sustainable management of land and soil resources, as stated in decision III/11 of the Conference of the Parties to the Convention on Biological Diversity,[34] including identification of land degradation, which involves all interested parties at the local as well as the national level, including farmers, small-scale food producers, indigenous people(s), non-governmental organizations and, in particular, women, who have a vital role in rural communities. This should include action to ensure secure land tenure and access to land, credit and training, as well as the removal of obstacles that inhibit farmers, especially small-scale farmers and peasants, from investing in and improving their lands and farms.

63. It remains essential to continue efforts for the eradication of poverty through, inter alia, capacity-building to reinforce local food systems, improving food security and providing adequate nutrition for the more than 800 million undernourished people in the world, located mainly in developing countries. Governments should formulate policies that promote sustainable agriculture as well as productivity and profitability. Comprehensive rural policies are required to improve access to land, combat poverty, create employment and reduce rural emigration. In accordance with the commitments agreed to in the Rome Declaration on World Food Security and the World Food Summit Plan of Action, adopted by the World Food Summit,[35] sustainable food security for both the urban and the rural poor should be a policy priority,

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[34] Report of the third meeting of the Conference of the Parties to the Convention on Biological Diversity, Buenos Aires, Argentina, 3-14 November 1996 (UNEP/CBD/COP/3/38), annex II.

[35] Food and Agriculture Organization of the United Nations, Report of the World Food Summit, Rome, 13-17 November 1996, Part One (WFS 96/REP) (Rome, 1997), appendix.

and developed countries and the international community should provide assistance to developing countries to this end. To meet these objectives, Governments should attach high priority to implementing the commitments of the Rome Declaration and Plan of Action, especially the call for a minimum target of halving the number of undernourished people in the world by the year 2015. Governments and international organizations are encouraged to implement the Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture, adopted by the International Technical Conference on Plant Genetic Resources held at Leipzig, Germany from 17 to 23 June 1996. At the sixth session of the Commission on Sustainable Development, in 1998, the issues of sustainable agriculture and land use should be considered in relation to freshwater. The challenge for agricultural research is to increase yields on all farmlands while protecting and conserving the natural resource base. The international community and Governments must continue or increase investments in agricultural research because it can take years or decades to develop new lines of research and put research findings into sustainable practice on the land. Developing countries, particularly those with high population densities, will need international cooperation to gain access to the results of such research and to technology aimed at improving agricultural productivity in limited spaces. More generally, international cooperation continues to be needed to assist developing countries in many other aspects of basic requirements of agriculture. There is a need to support the continuation of the reform process in conformity with the Uruguay Round agreements, particularly article 20 of the Agreement on Agriculture, and to fully implement the World Trade Organization Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least-Developed and Net Food-Importing Developing Countries.

Desertification and drought

64. Governments are urged to conclude (by signing and ratifying, accepting, approving and/or acceding to) and to implement as soon as possible the United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa, which entered into force on 26 December 1996, and to support and actively participate in the first session of the Conference of the Parties to the Convention, which is to be held in Rome in September 1997.

65. The international community is urged to recognize the vital importance and necessity of international cooperation and partnership in combating desertification and mitigating the effects of drought. In order to increase the effectiveness and efficiency of existing financial mechanisms, the international community, in particular developed countries, should therefore support the global mechanism that would have the capacity to promote actions leading to the mobilization and channelling of substantial resources for advancing the implementation of the Convention and its regional annexes, and to contribute to the eradication of poverty, which is one of the principal consequences of desertification and drought in the majority of affected countries. Another view was that the international community, in particular developed countries, should provide new and additional resources towards the same ends. The transfer to developing countries of environmentally sound, economically viable and socially acceptable technologies relevant to combating desertification and/or mitigating the effects of drought, with a view to contributing to the achievement of sustainable development in affected areas, should be undertaken without delay on mutually agreed terms.

Biodiversity

66. There remains an urgent need for the conservation and sustainable use of biological diversity and the fair and equitable sharing of benefits arising from the utilization of components of genetic resources. The threat to biodiversity stems mainly from habitat destruction, over-harvesting, pollution and the inappropriate introduction of foreign plants and animals. There is an urgent need for Governments and the international community, with the support of relevant international institutions, as appropriate:

(a) To take decisive action to conserve and maintain genes, species and ecosystems with a view to promoting the sustainable management of biological diversity;

(b) To ratify the Convention on Biological Diversity and implement it fully and effectively together with the decisions of the Conference of the Parties, including recommendations on agricultural biological diversity and the Jakarta Mandate on Marine and Coastal Biological Diversity, and pursue urgently other tasks identified by the Conference of the Parties at its third meeting under the work programme on terrestrial biological diversity,[36] within the context of the ecosystems approach adopted in the Convention;

(c) To undertake concrete actions for the fair and equitable sharing of the benefits arising from the utilization of genetic resources, consistent with the provisions of the Convention and the decisions of the Conference of the Parties on, inter alia, access to genetic resources and the handling of biotechnology and its benefits;

(d) To pay further attention to the provision of new and additional financial resources for the implementation of the Convention;

(e) To facilitate the transfer of technologies, including biotechnology, to developing countries, consistent with the provisions of the Convention;

(f) To respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles, and encourage the equitable sharing of the benefits arising from traditional knowledge so that those communities are adequately protected and rewarded, consistent with the provisions of the Convention on Biological Diversity and in accordance with the decisions of the Conference of the Parties;

(g) To complete rapidly the biosafety protocol under the Convention on Biological Diversity, on the understanding that the United Nations Environment Programme International Technical Guidelines for Safety in Biotechnology may be used as an interim mechanism during its development, and to complement it after its conclusion, including the recommendations on capacity-building related to biosafety;

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[36] Report of the Third Meeting of the Conference of the Parties to the Convention on Biological Diversity, Buenos Aires, Argentina, 3-14 November 1996 (UNEP/CBD/COP/3/38), annex II, decision III/12.

(h) To stress the importance of the establishment of a clearing-house mechanism by Parties to the Convention, consistent with the provisions of the Convention;

(i) To recognize the role of women in the conservation of biological diversity and the sustainable use of biological resources;

(j) To provide the necessary support to integrate the conservation of biological diversity and the sustainable use of biological resources into national development plans;

(k) To promote international cooperation to develop and strengthen national capacity-building, including human resource development and institution-building;

(l) To provide incentive measures at the national, regional and international levels to promote the conservation and sustainable use of biological diversity, and to consider means to enhance developing countries' capabilities to compete in the emerging market for biological resources, while improving the functioning of that market.

Sustainable tourism

67. Tourism is now one of the world's largest industries and one of its fastest growing economic sectors. The expected growth in the tourism sector and the increasing reliance of many developing countries, including small island developing States, on this sector as a major employer and contributor to local, national, subregional and regional economies highlights the need to pay special attention to the relationship between environmental conservation and protection and sustainable tourism. In this regard, the efforts of developing countries to broaden the traditional concept of tourism to include cultural and eco-tourism merit special consideration as well as the assistance of the international community, including the international financial institutions.

68. There is a need to consider further the importance of tourism in the context of Agenda 21. Tourism, like other sectors, uses resources, generates wastes and creates environmental, cultural and social costs and benefits in the process. For sustainable patterns of consumption and production in the tourism sector, it is essential to strengthen national policy development and enhance capacity in the areas of physical planning, impact assessment, and the use of economic and regulatory instruments, as well as in the areas of information, education and marketing. A particular concern is the degradation of biodiversity and fragile ecosystems, such as coral reefs, mountains, coastal areas and wetlands.

69. Policy development and implementation should take place in cooperation with all interested parties, especially the private sector and local and indigenous communities. The Commission should develop an action-oriented international programme of work on sustainable tourism, to be defined in cooperation with the World Tourism Organization, the United Nations Conference on Trade and Development, the United Nations Environment Programme, the Conference of the Parties to the Convention on Biological Diversity and other relevant bodies.

70. The sustainable development of tourism is of importance for all countries, in particular for small island developing States. International cooperation is needed to facilitate tourism development in developing countries - including the development and marketing of eco-tourism, bearing in mind the importance of the conservation policies required to secure long-term benefits from development in this sector - in particular in small island developing States, in the context of the Programme of Action for the Sustainable Development of Small Island Developing States.

Small island developing States

71. The international community reaffirms its commitment to the implementation of the Programme of Action for the Sustainable Development of Small Island Developing States. The Commission on Sustainable Development carried out a mid-term review of selected programme areas of the Programme of Action at its fourth session, in 1996. At its sixth session, in 1998, the Commission will undertake a review of all the outstanding chapters and issues of the Programme of Action. A full and comprehensive review of the Programme of Action, consistent with the review of other United Nations global conferences, is scheduled for 1999. The Commission, at its fifth session, adopted a resolution on modalities for the full and comprehensive review of the Programme of Action, in which it recommended that the General Assembly hold a two-day special session immediately preceding its fifty-fourth session for an in-depth assessment and appraisal of the implementation of the Programme of Action.[37] The full implementation of the decision would represent a significant contribution to achieving the objectives of the Global Conference for the Sustainable Development of Small Island Developing States.

72. Considerable efforts are being made at the national and regional levels to implement the Programme of Action. These efforts need to be supplemented by effective financial support from the international community. External assistance for building the requisite infrastructure and for national capacity-building, including human and institutional capacity, and for facilitating access to information on sustainable development practices and the transfer of environmentally sound technologies, in accordance with paragraph 34.14 (b) of Agenda 21, is crucial for small island developing States to effectively attain the goals of the Programme of Action. To assist national capacity-building, the small island developing States information network and small island developing States technical assistance programme should be made operational as soon as possible, with support for existing regional and subregional institutions.

Natural disasters

73. Natural disasters have disproportionate consequences for developing countries, in particular small island developing States and countries with extremely fragile ecosystems. Programmes for sustainable development should give higher priority to the implementation of the commitments made at the World Conference on Natural Disaster Reduction held at Yokohama, Japan from 23 to 27 May 1994.[38] There is a particular need for capacity-building for

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[37] Official Records of the Economic and Social Council, 1997, Supplement No. 9 (E/1997/29), chap. I, resolution 5/1, para. 6.

[38] See A/CONF.172/9 and Add.1.

disaster planning and management and for the promotion and facilitation of the transfer of early-warning technologies to countries prone to disasters, in particular developing countries and countries with economies in transition.

74. Given that further work is needed throughout the world, there is a special need to provide developing countries with further assistance in:

(a) Strengthening mechanisms and policies designed to reduce the effects of natural disasters, improve preparedness and integrate natural disaster considerations in development planning, through, inter alia, access to resources for disaster mitigation and preparedness, response and recovery;

(b) Improving access to relevant technology and training in hazard and risk assessment and early warning systems, and in protection from environmental disasters, consistent with national, subregional and regional strategies;

(c) Providing and facilitating technical, scientific and financial support for disaster preparedness and response in the context of the International Decade for Natural Disaster Reduction.

Major technological and other disasters with an adverse impact on the environment

75. Major technological and other disasters with an adverse impact on the environment can be a substantial obstacle in the way of achieving the goals of sustainable development in many countries. The international community should intensify cooperation in the prevention and reduction of such disasters and in disaster relief and post-disaster rehabilitation in order to enhance the capabilities of affected countries to cope with such situations.

C. Means of implementation

Financial resources and mechanisms

76. Financial resources and mechanisms play a key role in the implementation of Agenda 21. In general, the financing for the implementation of Agenda 21 will come from a country's own public and private sectors. For developing countries, official development assistance is a main source of external funding, and substantial new and additional funding for sustainable development and the implementation of Agenda 21 will be required. Hence, all financial commitments of Agenda 21, particularly those contained in chapter 33, and the provisions with regard to new and additional resources that are both adequate and predictable need to be urgently fulfilled. Renewed efforts are essential to ensure that all sources of funding contribute to economic growth, social development and environmental protection in the context of sustainable development and the implementation of Agenda 21.

77. For developing countries, particularly those in Africa and the least developed countries, official development assistance remains a main source of external funding; it is essential for the prompt and effective implementation of Agenda 21 and cannot generally be replaced by private capital flows. Developed countries should therefore fulfil the commitments undertaken to reach the accepted United Nations target of 0.7 per cent of gross national product as soon as possible. In this context the present downward trend in

the ratio of official development assistance to gross national product causes concern. Intensified efforts should be made to reverse this trend, taking into account the need for improving the quality and effectiveness of official development assistance. In the spirit of global partnership, the underlying factors that have led to this decrease should be addressed by all countries. Strategies should be worked out for increasing donor support for aid programmes and revitalizing the commitments that donors made at the United Nations Conference on Environment and Development. Some countries already meet or exceed the 0.7 per cent agreed target. Official financial flows to developing countries, particularly the least developed countries, remain an essential element of the partnership embodied in Agenda 21. Official development assistance plays a significant role, inter alia, in capacity-building, infrastructure, combating poverty and environmental protection in developing countries, and a crucial role in the least developed countries. Official development assistance can play an important complementary and catalytic role in promoting economic growth and may, in some cases, play a catalytic role in encouraging private investment and, where appropriate, all aspects of country-driven capacity-building and strengthening.

78. Funding by multilateral financial institutions through their concessional mechanisms is also essential to developing countries in their efforts to fully implement the sustainable development objectives contained in Agenda 21. Such institutions should continue to respond to the development needs and priorities of developing countries. Developed countries should urgently meet their commitments under the eleventh replenishment of the International Development Association.

79. Continued and full donor commitment to adequate, sustained and predictable funding for Global Environment Facility operations is important for developing countries so that global environmental benefits can be further achieved. Donor countries are urged to engage in providing new and additional resources, with a view to equitable burden-sharing, through the satisfactory replenishment of the Facility, which makes available grant and concessional funding designed to achieve global environmental benefits, thereby promoting sustainable development. Consideration should be given to further exploring the flexibility of the existing mandate of the Facility in supporting activities to achieve global environmental benefits. With regard to the project cycle, further efforts should be made to continue streamlining the decision-making process in order to maintain an effective and efficient, as well as transparent, participatory and democratic framework. The Global Environment Facility, when acting as the operating entity of the financial mechanism of the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity, should continue to operate in conformity with those Conventions and promote their implementation. The Facility implementing agencies, the United Nations Development Programme, the United Nations Environment Programme and the World Bank, should strengthen, as appropriate and in accordance with their respective mandates, their cooperation at all levels, including the field level.

80. The efficiency, effectiveness and impact of the operational activities of the United Nations system must be enhanced by, inter alia, a substantial increase in their funding on a predictable, continuous and assured basis, commensurate with the increasing needs of developing countries, as well as through the full implementation of General Assembly resolutions 47/199 of 22 December 1992 and 48/162 of 20 December 1993. There is a need for a

substantial increase in resources for operational activities for development on a predictable, continuous and assured basis, commensurate with the increasing needs of developing countries.

81. Private capital is a major tool for achieving economic growth in a growing number of developing countries. Higher levels of foreign private investment should be mobilized given its mounting importance. To stimulate higher levels of private investment, Governments should aim at ensuring macroeconomic stability, open trade and investment policies, and well-functioning legal and financial systems. Further studies should be undertaken, including studies on the design of an appropriate environment, at both the national and international levels, for facilitating foreign private investment, in particular foreign direct investment flows to developing countries, and enhancing its contribution to sustainable development. To ensure that such investments are supportive of sustainable development objectives, it is essential that the national Governments of both investor and recipient countries provide appropriate regulatory frameworks and incentives for private investment. Therefore further work should be undertaken on the design of appropriate policies and measures aimed at promoting long-term investment flows to developing countries for activities that increase their productive capability, and at reducing the volatility of these flows. Official development assistance donors and multilateral development banks are encouraged to strengthen their commitment to supporting investment in developing countries in a manner that jointly promotes economic growth, social development and environmental protection.

82. The external debt problem continues to hamper the efforts of developing countries to achieve sustainable development. To resolve the remaining debt problems of the heavily indebted poor countries, creditor and debtor countries and international financial institutions should continue their efforts to find effective, equitable, development-oriented and durable solutions to the debt problem, including debt relief in the form of debt rescheduling, debt reduction, debt swaps and, as appropriate, debt cancellation, as well as grants and concessional flows that will help restore creditworthiness. The joint World Bank/International Monetary Fund Heavily Indebted Poor Countries Debt Initiative supported by the Paris Club creditor countries is an important development to reduce the multilateral debt problem. Implementation of the Initiative requires additional financial resources from both bilateral and multilateral creditors without affecting the support required for the development activities of developing countries.

83. A fuller understanding of the impact of indebtedness on the pursuit of sustainable development by developing countries is needed. To this end, the United Nations Secretariat, the World Bank and the International Monetary Fund are invited to collaborate with the United Nations Conference on Trade and Development in further considering the interrelationship between indebtedness and sustainable development for developing countries.

84. While international cooperation is very important in assisting developing countries in their development efforts, in general financing for the implementation of Agenda 21 will come from countries' own public and private sectors. Policies for promoting domestic resource mobilization, including credit, could encompass sound macroeconomic reforms, including fiscal and monetary policy reforms, review and reform of existing subsidies, and the promotion of personal savings and access to credit, especially micro-credit, in particular for women. Such policies should be decided by

each country, taking into account its own characteristics and capabilities and different levels of development, especially as reflected in national sustainable development strategies, where they exist.

85. There is a need for making existing subsidies more transparent in order to increase public awareness of their actual economic, social and environmental impact, and for reforming or, where appropriate, removing them. Further national and international research in that area should be promoted in order to assist Governments in identifying and considering phasing-out subsidies that have market distorting, and socially and environmentally damaging impacts. Subsidy reductions should take full account of the specific conditions and the different levels of development of individual countries and should consider potentially regressive impacts, particularly on developing countries. In addition, it would be desirable to use international cooperation and coordination to promote the reduction of subsidies where these have important implications for competitiveness.

86. In order to reduce the barriers to the expanded use of economic instruments, Governments and international organizations should collect and share information on their use and introduce pilot schemes that would, inter alia, demonstrate how to make the best use of them while avoiding adverse effects on competitiveness and the terms of trade of all countries, particularly developing countries, and on marginalized and vulnerable sectors of society. When introducing economic instruments that raise the cost of economic activities for households and small and medium-sized enterprises, Governments should consider gradual phase-ins, public education programmes and targeted technical assistance as strategies for reducing distributional impacts. Various studies and practical experience in a number of countries, in particular developed countries, indicate that the appropriate use of relevant economic instruments may help generate positive possibilities for shifting consumer and producer behaviour to more sustainable directions in those countries. There is, however, a need to conduct further studies and test practical experience in more countries, taking into account country-specific conditions and the acceptability, legitimacy, equity, efficiency and effectiveness of such economic instruments.

87. Innovative financial mechanisms are currently under discussion in international and national forums but have not yet fully evolved conceptually. The Secretary-General is to submit a report concerning innovative financing mechanisms to the Economic and Social Council at its substantive session of 1997. In view of the widespread interest in those mechanisms, appropriate organizations, including the United Nations Conference on Trade and Development, the World Bank and the International Monetary Fund, are invited to consider conducting forward-looking studies of concerted action on such mechanisms and to share them with the Commission on Sustainable Development, other relevant intergovernmental organizations and non-governmental organizations. In this regard, innovative funding should complement official development assistance, not replace it. New initiatives for cooperative implementation of environment and development objectives under mutually beneficial incentive structures should be further explored.

Transfer of environmentally sound technologies

88. The availability of scientific and technological information and access to and transfer of environmentally sound technologies are essential requirements for sustainable development. There is an urgent need for

developing countries to acquire greater access to environmentally sound technologies if they are to meet the obligations agreed at the United Nations Conference on Environment and Development and in the relevant international conventions. The ability of developing countries to participate in, benefit from and contribute to rapid advances in science and technology can significantly influence their development. This calls for the urgent fulfilment of all the Conference commitments concerning concrete measures for the transfer of environmentally sound technologies to developing countries. The international community should promote, facilitate and finance, as appropriate, access to and transfer of environmentally sound technologies and the corresponding know-how, in particular to developing countries, on favourable terms, including concessional and preferential terms, as mutually agreed, taking into account the need to protect intellectual property rights as well as the special needs of developing countries for the implementation of Agenda 21. Current forms of cooperation involving the public and private sectors of developing and developed countries should be built upon and expanded. In this context, it is important to identify barriers and restrictions to the transfer of publicly and privately owned environmentally sound technologies, with a view to reducing such constraints while creating specific incentives, fiscal and otherwise, for the transfer of such technologies. Progress in the fulfilment of all the provisions contained in chapter 34 of Agenda 21 should be reviewed regularly as part of the multi-year work programme of the Commission on Sustainable Development.

89. Technology transfer and the development of the human and institutional capacity to adapt, absorb and disseminate technologies, as well as to generate technical knowledge and innovations, are part of the same process and must be given equal importance. Governments have an important role to play in providing, inter alia, research and development institutions with incentives to promote and contribute to the development of institutional and human capacities.

90. Much of the most advanced environmentally sound technology is developed and held by the private sector. The creation of an enabling environment, on the part of both developed and developing countries, including supportive economic and fiscal measures, as well as a practical system of environmental regulations and compliance mechanisms, can help to stimulate private sector investment in and transfer of environmentally sound technology to developing countries. New ways of financial intermediation for the financing of environmentally sound technologies, such as "green credit lines", should be examined. Further efforts should be made by Governments and international development institutions to facilitate the transfer of privately owned technology on concessional terms, as mutually agreed, to developing countries, especially the least developed countries.

91. A proportion of technology is held or owned by Governments and public institutions or results from publicly funded research and development activities. The Government's control and influence over the technological knowledge produced in publicly funded research and development institutions open up the potential for the generation of publicly owned technologies that could be made accessible to developing countries, and could be an important means for Governments to catalyse private sector technology transfer. Proposals for the further study of the options with respect to those technologies and publicly funded research and development activities are to be welcomed.

92. Governments should create a legal and policy framework that is conducive to technology-related private sector investments and long-term sustainable development objectives. Governments and international development institutions should continue to play a key role in establishing public-private partnerships, within and between developed and developing countries and countries with economies in transition. Such partnerships are essential for linking the advantages of the private sector - access to finance and technology, managerial efficiency, entrepreneurial experience and engineering expertise - with the capacity of Governments to create a policy environment that is conducive to technology-related private sector investments and long-term sustainable development objectives.

93. The creation of centres for the transfer of technology at various levels, including the regional level, could greatly contribute to achieving the objective of transfer of environmentally sound technologies to developing countries. For this purpose, existing United Nations bodies, including, as appropriate, the Commission on Science and Technology for Development, the United Nations Conference on Trade and Development, the United Nations Industrial Development Organization, the United Nations Environment Programme and the regional commissions, should cooperate and mechanisms be used, such as technical cooperation among developing countries and economic cooperation among developing countries.

94. Governments and international development institutions can also play an important role in bringing together companies from developed and developing countries and countries with economies in transition so that they can create sustainable and mutually beneficial business linkages. Incentives should be provided to stimulate the building of joint ventures between small and medium-sized enterprises of developed and developing countries and countries with economies in transition, and cleaner production programmes in public and private companies should be supported.

95. Governments of developing countries should take appropriate measures to strengthen South-South cooperation for technology transfer and capacity-building. Such measures could include the networking of existing national information systems and sources on environmentally sound technologies, and the networking of national cleaner production centres, as well as the establishment of sector-specific regional centres for technology transfer and capacity-building. Interested donor countries and international organizations should further assist developing countries in those efforts through, inter alia, supporting trilateral arrangements and contributing to the United Nations Voluntary Trust Fund for South-South Cooperation.

96. Attention must also be given to technology needs assessment as a tool for Governments in identifying a portfolio for technology transfer projects and capacity-building activities to be undertaken to facilitate and accelerate the development, adoption and dissemination of environmentally sound technologies in particular sectors of the national economy. It is also important for Governments to promote the integration of environmental technology assessment with technology needs assessment as an important tool for evaluating environmentally sound technologies and the organizational, managerial and human resource systems related to the proper use of those technologies.

97. There is a need to further explore and enhance the potential of global electronic information and telecommunication networks. This would enable

countries to choose among the available technological options that are most appropriate to their needs. In this respect, the international community should assist developing countries in enhancing their capacities.

Capacity-building

98. Renewed commitment and support from the international community is essential to support national efforts for capacity-building in developing countries and countries with economies in transition.

99. The United Nations Development Programme, inter alia, through its Capacity 21 programme, should give priority attention to building capacity for the elaboration of sustainable development strategies based on participatory approaches. In this context, developing countries should be assisted, particularly in the areas of the design, implementation and evaluation of programmes and projects.

100. Capacity-building efforts should pay particular attention to the needs of women in order to ensure that their skills and experience are fully used in decision-making at all levels. The special needs, culture, traditions and expertise of indigenous people must be recognized. International financial institutions should continue to give high priority to funding capacity-building for sustainable development in developing countries and countries with economies in transition. Special attention should also be given to strengthening the ability of developing countries to absorb and generate technologies. International cooperation needs to be strengthened to promote the endogenous capacity of developing countries to utilize scientific and technological developments from abroad and to adapt them to local conditions. The role of the private sector in capacity-building should be further promoted and enhanced. South-South cooperation in capacity-building should be further supported through "triangular" cooperative arrangements. Both developed and developing countries, in cooperation with relevant international institutions, need to strengthen their efforts to develop and implement strategies for more effective sharing of environmental expertise and data.

Science

101. Public and private investment in science, education and training, and research and development should be increased significantly, with emphasis on the need to ensure equal access to opportunities for girls and women.

102. International consensus-building is facilitated by the availability of authoritative scientific evidence. There is a need for further scientific cooperation, especially across disciplines, in order to verify and strengthen scientific evidence and make it accessible to developing countries. This evidence is important for assessing environmental conditions and changes. Steps should also be taken by Governments, academia, and scientific institutions to improve access to scientific information related to the environment and sustainable development. The promotion of existing regional and global networks may be useful for this purpose.

103. Increasing efforts to build and strengthen scientific and technological capacity in developing countries is an extremely important objective. Multilateral and bilateral donor agencies and Governments, as well as specific funding mechanisms, should continue to enhance their support for developing

countries. Attention should also be given to countries with economies in transition.

104. The international community should also actively collaborate in promoting innovations in information and communication technologies for the purpose of reducing environmental impacts, inter alia, by taking approaches to technology transfer and cooperation that are based on user needs.

Education and awareness

105. Education increases human welfare, and is a decisive factor in enabling people to become productive and responsible members of society. A fundamental prerequisite for sustainable development is an adequately financed and effective educational system at all levels, particularly the primary and secondary levels, that is accessible to all and that augments both human capacity and well-being. The core themes of education for sustainability include lifelong learning, interdisciplinary education, partnerships, multicultural education and empowerment. Priority should be given to ensuring women's and girls' full and equal access to all levels of education and training. Special attention should also be paid to the training of teachers, youth leaders and other educators. Education should also be seen as a means of empowering youth and vulnerable and marginalized groups, including those in rural areas, through intergenerational partnerships and peer education. Even in countries with strong education systems, there is a need to reorient education, awareness and training so as to promote widespread public understanding, critical analysis and support for sustainable development. Education for a sustainable future should engage a wide spectrum of institutions and sectors, including but not limited to business/industry, international organizations, youth, professional organizations, non-governmental organizations, higher education, government, educators and foundations, to address the concepts and issues of sustainable development, as embodied throughout Agenda 21, and should include the preparation of sustainable development education plans and programmes, as emphasized in the work programme of the Commission on Sustainable Development on the subject adopted in 1996.[39] The concept of education for a sustainable future will be further developed by the United Nations Educational, Scientific and Cultural Organization, in cooperation with others.

106. It is necessary to support and strengthen universities and other academic centres in promoting cooperation among them, particularly cooperation between those of developing countries and those of developed countries.

International legal instruments and the Rio Declaration on Environment and Development

107. The implementation and application of the principles contained in the Rio Declaration on Environment and Development should be the subject of regular assessment and reporting to the Commission on Sustainable Development by the Secretariat in collaboration with the United Nations Environment Programme, in particular.

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[39] See Official Records of the Economic and Social Council, 1996, Supplement No. 8 (E/1996/28), chap. I, sect. C, decision 4/11.

108. Access to information and broad public participation in decision-making are fundamental to sustainable development. Further efforts are required to promote, in the light of country-specific conditions, the integration of environment and development policies, through appropriate legal and regulatory policies, instruments and enforcement mechanisms at the national, state, provincial and local levels. At the national level, each individual should have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in the communities, and the opportunity to participate in decision-making processes. Governments and legislators, with the support, where appropriate, of competent international organizations, should establish judicial and administrative procedures for legal redress and remedy of actions affecting environment and development that may be unlawful or infringe on rights under the law, and should provide access to individuals, groups and organizations with a recognized legal interest. Access should be provided to effective judicial and administrative channels for affected individuals and groups to ensure that all authorities, both national and local, and other civil organizations remain accountable for their actions in accordance with their obligations, at the appropriate levels for the country concerned, taking into account the judicial and administrative systems of the country concerned.

109. Taking into account the provisions of chapter 39, particularly paragraph 39.1, of Agenda 21, it is necessary to continue the progressive development and, as and when appropriate, codification of international law related to sustainable development. Relevant bodies in which such tasks are being undertaken should cooperate and coordinate in this regard.

110. Implementation of and compliance with commitments made under international treaties and other instruments in the field of the environment remain a priority. Implementation can be promoted by secure, sustained and predictable financial support, sufficient institutional capacity, human resources and adequate access to technology. Cooperation on implementation between States on mutually agreed terms may help reduce potential sources of conflict between States. In this context, States should further study and consider methods to broaden and make more effective the range of techniques available at present, taking into account relevant experience under existing agreements and, where appropriate, modalities for dispute avoidance and settlement, in accordance with the Charter of the United Nations. It is also important to further improve reporting and data-collection systems and to further develop appropriate compliance mechanisms and procedures, on a mutually agreed basis, to help and encourage States to fulfil all their obligations, including means of implementation, under multilateral environmental agreements. Developing countries should be assisted to develop these tools according to country-specific conditions.

Information and tools for measuring progress

111. The further development of cost-effective tools for collecting and disseminating information for decision makers at all levels through strengthened data collection, including, as appropriate, gender-disaggregated data and information that makes visible the unremunerated work of women for use in programme planning and implementation, compilation and analysis is urgently needed. In this context, emphasis will be placed on support for national and international scientific and technological data centres with appropriate electronic communication links between them.

112. A supportive environment needs to be established to enhance national capacities and capabilities for information collection, processing and dissemination, especially in developing countries, to facilitate public access to information on global environmental issues through appropriate means, including high-tech information and communication infrastructure related to the global environment, in the light of country-specific conditions, using, where available, such tools as geographic information systems and video transmission technology, including global mapping. In this regard, international cooperation is essential.

113. Environmental impact assessments are an important national tool for sustainable development. In accordance with Principle 17 of the Rio Declaration on Environment and Development, environmental impact assessments should be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority; where appropriate, they should be made available early in the project cycle.

114. The work programme of the Commission on Sustainable Development on indicators of sustainable development should result in a practicable and agreed set of indicators, suited to country-specific conditions, including a limited number of aggregated indicators, to be used at the national level, on a voluntary basis, by the year 2000. Such indicators of sustainable development, including, where appropriate, and subject to nationally specific conditions, sector-specific ones, should play an important role in monitoring progress towards sustainable development at the national level and in facilitating national reporting, as appropriate.

115. National reports on the implementation of Agenda 21 have proved to be a valuable means of sharing information at the international and regional levels and, even more important, of providing a focus for the coordination of issues related to sustainable development at the national level within individual countries. National reporting should continue (see also para. 133 (b) and (c) below).

IV. INTERNATIONAL INSTITUTIONAL ARRANGEMENTS

116. The achievement of sustainable development requires continued support from international institutions. The institutional framework outlined in chapter 38 of Agenda 21 and determined by the General Assembly in its resolution 47/191 of 22 December 1992 and other relevant resolutions, including the specific functions and roles of various organs, organizations and programmes within and outside the United Nations system, will continue to be fully relevant in the period after the nineteenth special session of the General Assembly. In the light of the ongoing discussions on reform within the United Nations, international institutional arrangements in the area of sustainable development are intended to contribute to the goal of strengthening the entire United Nations system. In this context, the strengthening of the institutions for sustainable development, as well as the achievement of the goals and objectives set out below are particularly important.

A. Greater coherence in various intergovernmental organizations and processes

117. Given the increasing number of decision-making bodies concerned with various aspects of sustainable development, including international conventions, there is an ever greater need for better policy coordination at the intergovernmental level, as well as for continued and more concerted efforts to enhance collaboration among the secretariats of those decision-making bodies. Under the guidance of the General Assembly, the Economic and Social Council should play a strengthened role in coordinating the activities of the United Nations system in the economic, social and related fields.

118. The conferences of the parties to conventions signed at the United Nations Conference on Environment and Development or as a result of it, as well as other conventions related to sustainable development, should cooperate in exploring ways and means of collaborating in their work to advance the effective implementation of the conventions. There is also a need for environmental conventions to continue to pursue sustainable development objectives consistent with their provisions and be fully responsive to Agenda 21. To this end, inter alia, the conferences of the parties to or governing bodies of the conventions signed at the United Nations Conference on Environment and Development, or as a result of it, and of other relevant conventions and agreements should, if appropriate, give consideration to the co-location of secretariats, to improving the scheduling of meetings, to integrating national reporting requirements, to improving the balance between sessions of the conferences of the parties and sessions of their subsidiary bodies, and to encouraging and facilitating the participation of Governments in those sessions, at an appropriate level.

119. Institutional arrangements for the convention secretariats should provide effective support and efficient services, while ensuring the appropriate autonomy necessary for them to be efficient at their respective locations. At the international and national levels there is a need for, inter alia, better scientific assessment of ecological linkages between the conventions; identification of programmes that have multiple benefits; and enhanced public awareness-raising with respect to the conventions. Such tasks should be undertaken by the United Nations Environment Programme in accordance with the relevant decisions of its Governing Council and in full cooperation with the conferences of the parties to and governing bodies of relevant conventions. Efforts of convention secretariats, in response to requests from the respective conferences of the parties, to explore, where appropriate, modalities for suitable liaison arrangements in Geneva and/or New York for the purpose of enhancing linkages with delegations and organizations at those United Nations centres are welcomed and fully supported.

120. It is necessary to strengthen the Inter-Agency Committee on Sustainable Development of the Administrative Committee on Coordination and its system of task managers, with a view to further enhancing system-wide intersectoral cooperation and coordination for the implementation of Agenda 21 and for the promotion of coordinated follow-up to the major United Nations conferences in the area of sustainable development.

121. The Commission on Sustainable Development should promote increased regional implementation of Agenda 21 in cooperation with relevant regional and subregional organizations and the United Nations regional commissions, in accordance with the results of their priority-setting efforts, with a view to enhancing the role such bodies play in the achievement of sustainable development objectives agreed at the international level. The regional

commissions could provide appropriate support, consistent with their work programmes, to regional meetings of experts related to the implementation of Agenda 21.

B. Role of relevant organizations and institutions of the United Nations system

122. In order to facilitate the national implementation of Agenda 21, all organizations and programmes of the United Nations system, within their respective areas of expertise and mandates, should strengthen, individually and jointly, the support for national efforts to implement Agenda 21 and make their efforts and actions consistent with national plans, policies and priorities of member States. Coordination of United Nations activities at the field level should be further enhanced through the resident coordinator system in full consultation with national Governments.

123. The role of United Nations Environment Programme, as the principal United Nations body in the field of the environment, should be further enhanced. Taking into account its catalytic role, and in conformity with Agenda 21 and the Nairobi Declaration on the Role and Mandate of the United Nations Environment Programme, adopted on 7 February 1997,[40] the Programme is to be the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system, and serves as an authoritative advocate for the global environment. In this context, decision 19/32 of 4 April 1997 of the United Nations Environment Programme Governing Council on governance of the Programme[41] and other related Governing Council decisions[41] are relevant. The role of the United Nations Environment Programme in the further development of international environmental law should be strengthened, including the development of coherent interlinkages among relevant environmental conventions in cooperation with their respective conferences of the parties or governing bodies. In performing its functions related to the conventions signed at the United Nations Conference on Environment and Development or as a result of it, and other relevant conventions, the United Nations Environment Programme should strive to promote the effective implementation of those conventions in a manner consistent with the provisions of the conventions and the decisions of the conferences of the parties.

124. The United Nations Environment Programme, in the performance of its role, should focus on environmental issues, taking into account the development perspective. A revitalized Programme should be supported by adequate, stable and predictable funding. The Programme should continue providing effective support to the Commission on Sustainable Development, inter alia, in the form of scientific, technical and policy information and analysis of and advice on global environmental issues.

125. The United Nations Development Programme should continue to strengthen its contribution to and programmes in sustainable development and the

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[40] Official Records of the General Assembly, Fifty-second Session, Supplement No. 25 (A/52/25), annex, decision 19/1, annex.

[41] Ibid., Supplement No. 25 (A/52/25), annex.

implementation of Agenda 21 at all levels, particularly in the area of promoting capacity-building (including through its Capacity 21 programme) in cooperation with other organizations, as well as in the field of poverty eradication.

126. The United Nations Conference on Trade and Development, in accordance with General Assembly resolution 51/167 of 16 December 1996 and relevant decisions of the Trade and Development Board on the work programme, should continue to play a key role in the implementation of Agenda 21 through the integrated examination of linkages among trade, investment, technology, finance and sustainable development.

127. The Committee on Trade and Environment of the World Trade Organization, the United Nations Conference on Trade and Development and the United Nations Environment Programme should advance their coordinated work on trade and environment, involving other appropriate international and regional organizations in their cooperation and coordination. In coordination with the World Trade Organization, the United Nations Conference on Trade and Development and the United Nations Environment Programme should continue to support efforts to promote the integration of trade, environment and development. The Commission on Sustainable Development should continue to play its important role in the deliberations on trade and environment so as to facilitate the integrated consideration of all factors relevant for achieving sustainable development.

128. Implementation of the commitment of the international financial institutions to sustainable development should continue to be strengthened. The World Bank has a significant role to play, bearing in mind its expertise and the overall volume of resources that it commands.

129. Operationalization of the global mechanism of the United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa is also essential.

C. Future role and programme of work of the Commission on Sustainable Development

130. The Commission on Sustainable Development, within its mandate as specified in General Assembly resolution 47/191, will continue to provide a central forum for reviewing progress and for urging further implementation of Agenda 21 and other commitments made at the United Nations Conference on Environment and Development or as a result of it; for conducting a high-level policy debate aimed at consensus-building on sustainable development; and for catalysing action and long-term commitment to sustainable development at all levels. It should continue to undertake these tasks in complementing and providing interlinkages to the work of other United Nations organs, organizations and bodies acting in the field of sustainable development. The Commission has a role to play in assessing the challenges of globalization as they relate to sustainable development. The Commission should perform its functions in coordination with other subsidiary bodies of the Economic and Social Council and with related organizations and institutions, including making recommendations, within its mandate, to the Economic and Social Council, bearing in mind the interrelated outcomes of recent United Nations conferences.

131. The Commission should focus on issues that are crucial to achieving the goals of sustainable development. It should promote policies that integrate economic, social and environmental dimensions of sustainability and should provide for integrated consideration of linkages, both among sectors and between sectoral and cross-sectoral aspects of Agenda 21. In this connection, the Commission should carry out its work in such a manner as to avoid unnecessary duplication and repetition of work undertaken by other relevant forums.

132. In the light of the above, it is recommended that the Commission on Sustainable Development adopt the multi-year programme of work for the period 1998-2002 contained in the appendix below.

D. Methods of work of the Commission on Sustainable Development

133. Based on the experience gained during the period 1993-1997, the Commission, under the guidance of the Economic and Social Council, should:

(a) Make concerted efforts to attract the greater involvement in its work of ministers and high-level national policy makers responsible for specific economic and social sectors, who, in particular, are encouraged to participate in the annual high-level segment of the Commission, together with the ministers and policy makers responsible for environment and development. The high-level segments of the Commission should become more interactive, and should focus on the priority issues being considered at a particular session. The Bureau of the Commission should conduct timely and open-ended consultations with the view to improving the organization of the work of the high-level segment;

(b) Continue to provide a forum for the exchange of national experience and best practices in the area of sustainable development, including through voluntary national communications or reports. Consideration should be given to the results of ongoing work aimed at streamlining requests for national information and reporting and to the results of the "pilot phase" relating to indicators of sustainable development. In this context, the Commission should consider more effective modalities for the further implementation of the commitments made in Agenda 21, with appropriate emphasis on the means of implementation. Countries may wish to submit to the Commission, on a voluntary basis, information regarding their efforts to incorporate the relevant recommendations of other United Nations conferences in national sustainable development strategies;

(c) Take into account regional developments related to the implementation of the outcomes of the United Nations Conference on Environment and Development. It should provide a forum for the exchange of experience on regional and subregional initiatives and regional collaboration for sustainable development. This could include the promotion of the voluntary regional exchange of national experience in the implementation of Agenda 21 and, inter alia, the possible development of modalities for reviews within regions by and among those countries that voluntarily agree to do so. In this context, the Commission should encourage the availability of funding for the implementation of initiatives related to such reviews;

(d) Establish closer interaction with international financial, development and trade institutions, as well as with other relevant bodies

within and outside the United Nations system, including the World Bank, the Global Environment Facility, the United Nations Development Programme, the World Trade Organization, the United Nations Conference on Trade and Development and the United Nations Environment Programme, which, in turn, are invited to take full account of the results of policy deliberations in the Commission and to integrate them in their own work programmes and activities;

(e) Strengthen its interaction with representatives of major groups, including through greater and better use of focused dialogue sessions and round tables. These groups are important resources in operationalizing, managing and promoting sustainable development and contribute to the implementation of Agenda 21. The major groups are encouraged to adopt arrangements for coordination and interaction in providing inputs to the Commission. Taking into account the Commission's programme of work, this could include inputs from:

(i) The scientific community and research institutions, relating to the greater understanding of the interactions between human activity and natural ecosystems and on how to manage global systems sustainably;

(ii) Women, children and youth, indigenous people and their communities, non-governmental organizations, local authorities, workers and their trade unions and farmers on the elaboration, promotion and sharing of effective strategies, policies, practices and processes to promote sustainable development;

(iii) Business and industry groups on the elaboration, promotion and sharing of sustainable development practices and the promotion of corporate responsibility and accountability;

(f) Organize the implementation of its next multi-year programme of work in the most effective and productive way, including through shortening its annual meeting to two weeks. The inter-sessional ad hoc working groups should help to focus the Commission's sessions by identifying key elements to be discussed and important problems to be addressed within specific items of the Commission's programme of work. Government hosted and funded expert meetings will continue to provide inputs to the work of the Commission.

134. The Secretary-General is invited to review the functioning of the High-level Advisory Board on Sustainable Development and present proposals on ways to promote more direct interaction between the Board and the Commission, with a view to ensuring that the Board contributes to the deliberations on specific themes considered by the Commission in accordance with its programme of work.

135. The work of the Committee on New and Renewable Sources of Energy and on Energy for Development and the Committee on Natural Resources should be more compatible with and supportive of the programme of work of the Commission. The Economic and Social Council, in carrying out its functions related to the implementation of General Assembly resolution 50/227 of 24 May 1996, should consider, at its substantive session of 1997, the most effective means of bringing this about.

136. The arrangements for the election of the Bureau should be changed in order to allow the same Bureau to provide guidance in the preparations for and to lead the work during the annual sessions of the Commission. The Commission

would benefit from such a change. The Economic and Social Council should take the necessary action at its substantive session of 1997 to ensure that these new arrangements take effect.

137. The next comprehensive review of progress achieved in the implementation of Agenda 21 by the General Assembly will take place in the year 2002. The modalities of this review should be determined at a later stage.

Appendix

MULTI-YEAR PROGRAMME OF WORK FOR THE COMMISSION ON SUSTAINABLE DEVELOPMENT, 1998-2002

1998 session: Overriding issues: poverty/consumption and production patterns		
Sectoral theme: STRATEGIC APPROACHES TO FRESHWATER MANAGEMENT Review of outstanding chapters of the Programme of Action for the Sustainable Development of Small Island Developing States[a]	Cross-sectoral theme: TRANSFER OF TECHNOLOGY/ CAPACITY-BUILDING/ EDUCATION/SCIENCE/ AWARENESS-RAISING	Economic sector/major group: INDUSTRY
Main issues for an integrated discussion under the above theme: Agenda 21, chapters 2-8, 10-15, 18-21, 23-34, 36, 37 and 40	Main issues for an integrated discussion under the above theme: Agenda 21, chapters 2-4, 6, 16, 23-37 and 40	Main issues for an integrated discussion under the above theme: Agenda 21, chapters 4, 6, 9, 16, 17, 19-21, 23-35 and 40

1999 session: Overriding issues: poverty/consumption and production patterns		
Comprehensive review of the Programme of Action for the Sustainable Development of Small Island Developing States		
Sectoral theme: OCEANS AND SEAS	Cross-sectoral theme: CONSUMPTION AND PRODUCTION PATTERNS	Economic sector/major group: TOURISM
Main issues for an integrated discussion under the above theme: Agenda 21, chapters 5-7, 9, 15, 17, 19-32, 34-36, 39 and 40	Main issues for an integrated discussion under the above theme: Agenda 21, chapters 2-10, 14, 18-32, 34-36 and 40	Main issues for an integrated discussion under the above theme: Agenda 21, chapters 2-7, 13, 15, 17, 23-33 and 36

2000 session: Overriding issues: poverty/consumption and production patterns		
Sectoral theme: INTEGRATED PLANNING AND MANAGEMENT OF LAND RESOURCES	Cross-sectoral theme: FINANCIAL RESOURCES/ TRADE AND INVESTMENT/ ECONOMIC GROWTH	Economic sector/major group: AGRICULTURE[b] Day of Indigenous People
Main issues for an integrated discussion under the above theme: Agenda 21, chapters 2-8, 10-37 and 40	Main issues for an integrated discussion under the above theme: Agenda 21, chapters 2-4, 23-33, 36-38 and 40	Main issues for an integrated discussion under the above theme: Agenda 21, chapters 2-7, 10-16, 18-21, 23-34, 37 and 40

2001 session: Overriding issues: poverty/consumption and production patterns		
Sectoral theme: ATMOSPHERE/ENERGY	Cross-sectoral theme: INFORMATION FOR DECISION-MAKING AND PARTICIPATION INTERNATIONAL COOPERATION FOR AN ENABLING ENVIRONMENT	Economic sector/major group: ENERGY/TRANSPORT
Main issues for an integrated discussion under the above theme: Agenda 21, chapters 4, 6-9, 11-14, 17, 23-37, 39 and 40	Main issues for an integrated discussion under the above theme: Agenda 21, chapters 2, 4, 6, 8, 23-36 and 38-40	Main issues for an integrated discussion under the above theme: Agenda 21, chapters 2-5, 8, 9, 20, 23-37 and 40

2002 session
Comprehensive review

[a] Review to include those chapters of the Programme of Action for the Sustainable Development of Small Island Developing States not covered in the in-depth review carried out by the Commission on Sustainable Development at its fourth session.

[b] Including forestry.

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Sustainable development:
Protection of global climate for present and future generations of humankind
Implementation of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa
Convention on Biological Diversity

Implementation of United Nations environmental conventions

Note by the Secretary-General

The Secretary-General has the honour to transmit to the General Assembly the reports submitted by the secretariats of the United Nations Framework Convention on Climate Change, the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, and the Convention on Biological Diversity.

* A/77/150.

Please recycle

I. Report of the Executive Secretary of the United Nations Framework Convention on Climate Change on the work of the Conference of the Parties to the Convention

A. Introduction

1. The General Assembly, in its resolution 76/205, invited the secretariat of the United Nations Framework Convention on Climate Change to report to the Assembly at its seventy-seventh session, on the work of the Conference of the Parties to the Convention.

B. Outcomes of the twenty-sixth session of the Conference of the Parties to the Convention, the sixteenth session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol and the second part of the third session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement

1. Summary

2. The Conference of the Parties, presided over by the Government of the United Kingdom of Great Britain and Northern Ireland, was held in Glasgow, from 31 October to 13 November 2021, as follows:

(a) Twenty-sixth session of the Conference of the Parties;

(b) Sixteenth session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol;

(c) Third session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement;

(d) Fifty-second to fifty-fifth sessions of the Subsidiary Body for Scientific and Technological Advice;

(e) Fifty-second to fifty-fifth sessions of the Subsidiary Body for Implementation.

3. The Conference was attended by 15,975 Government delegates from 194 parties to the Convention, as well as representatives of 1 observer State; 11,001 observers, including those from 31 units of the United Nations Secretariat, 21 specialized agencies and related organizations, 75 intergovernmental organizations and 1,598 non-governmental organizations; and 2,602 media representatives.

4. The Conference took place at a moment when, on the one hand, the urgency of upscaling action on climate change, in both mitigation and adaptation, had become very clear, underpinned by the findings of the recent reports of the Intergovernmental Panel on Climate Change, the secretariat of the United Nations Framework Convention on Climate Change and the United Nations Environment Programme. On the other hand, the intergovernmental climate change process had clearly been delayed because of the constraints and challenges introduced by the global pandemic, including the postponement of the Conference by a year. These factors created the sense that it was urgent to take action, in particular with regard to keeping the temperature goals of the Paris Agreement, especially the 1.5°C goal, within reach. The motto of the Conference, “Keeping 1.5°C alive”, selected by the Conference Presidency, was well chosen in that context and it provided a forceful leading motive underpinning the negotiations.

5. The major, overarching decision of the Conference, the Glasgow Climate Pact, responds strongly to that sense of urgency by calling for the enhancement of ambition in climate action and outlining the most urgent steps that needed to be taken across key climate-related issues. Parties were called upon to accelerate the development, deployment and dissemination of technologies and the adoption of policies to transition towards low-emission energy systems, including by rapidly scaling up the deployment of clean power generation and energy efficiency measures, including accelerating efforts towards the phasedown of unabated coal power and the phase-out of inefficient fossil fuel subsidies, while providing targeted support to the poorest and most vulnerable in line with national circumstances and recognizing the need for support towards a just transition. It also resolved to move swiftly with the full implementation of the Paris Agreement and recognized the importance of international collaboration on innovative climate action, including technological advancement, across all actors of society, sectors and regions.

6. The Conference delivered a large number of significant substantive outcomes across all bodies: the Conference of the Parties adopted 23 decisions, the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol adopted 10 decisions and the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement adopted 24 decisions.

7. The outcomes of the six key substantive negotiation areas were as follows:

(a) With regard to finance, the gap in the fulfilment of the $100 billion goal and the increased pledges to address the gap in 2022–2023 were acknowledged. The need to mobilize climate finance from all sources to reach the level needed to achieve the goals of the Paris Agreement, beyond $100 billion per year, was confirmed and a decision on a three-year process (ad hoc work programme) for setting a new post-2025 goal on climate finance was taken, with the process to be concluded by 2024;

(b) With regard to adaptation, the urgency of scaling up action and support was recognized, and a two-year Glasgow-Sharm el-Sheikh work programme on the global goal on adaptation was established, reflecting Parties' recognition of the importance of such a goal and of the need for guidance on how to assess progress towards the goal;

(c) With regard to loss and damage, the functions of the Santiago network for averting, minimizing and addressing loss and damage associated with adverse effects of climate change were defined as part of a process to operationalize the network. To help address relevant support, a Glasgow climate dialogue was established to discuss the arrangements for funding for loss and damage over the course of three years;

(d) With regard to mitigation, the need for rapid, deep and sustained reductions in global greenhouse gas emissions, including the reduction of global carbon dioxide emissions by 45 per cent by 2030 relative to the 2010 level and to net zero around mid-century, as well as deep reductions in other greenhouse gases, was recognized. The Conference requested parties to revisit and strengthen the 2030 targets in their nationally determined contributions, as necessary, to align with the Paris Agreement temperature goal by the end of 2022, taking into account different national circumstances, and decided to convene an annual high-level ministerial round table on pre-2030 ambition from 2022 onward;

(e) Agreement on three decisions on voluntary cooperation instruments under article 6 of the Paris Agreement and a decision with guidance for operationalizing the modalities, procedures and guidelines for the enhanced transparency framework under article 13 of the Paris Agreement, along with some other relevant decisions, allowed for the closing of the pending chapters of the Paris Agreement rulebook, thus enabling full implementation of all parts of the Paris Agreement, including, where relevant, transition from the market-based mechanisms under the Kyoto Protocol.

8. The Conference recognized the important role of non-party stakeholders, including civil society, indigenous peoples, local communities, youth, children, local and regional governments and other stakeholders, in contributing to progress towards the objective of the Convention and the goals of the Paris Agreement. The work of the improved Marrakech Partnership for Global Climate Action for enhancing ambition and the leadership and actions of the high-level climate champions were welcomed.

2. High-level segment/events of the Conference of the Parties

9. The first part of the joint high-level segment of the twenty-sixth session of the Conference of the Parties, the sixteenth session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol and the third session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement was held on 1 and 2 November, as part of the World Leaders Summit. The resumed segment was held on 9 and 10 November.

10. At the opening of the World Leaders Summit, statements were made by prominent guests Yrsa Daley-Ward; the Prime Minister of the United Kingdom of Britain and Northern Ireland, Boris Johnson; a young climate activist, Brianna Fruean; the Secretary-General of the United Nations; the Prince of Wales; the People's Advocate of the Conference of the Parties, David Attenborough; the Prime Minister of Barbados, Mia Mottley; the Prime Minister of Italy, Mario Draghi; and the Executive Secretary of the United Nations Framework Convention on Climate Change.

11. During the high-level segment, 176 national statements were delivered, of which 113 were by Heads of State, 3 by Vice-Presidents, 2 by Deputy Prime Ministers, and 57 by ministers or representatives of the parties.

12. Statements were made by representatives of 27 observers, including non-governmental organizations (NGOs) in the areas of business and industry and the environment, farmers, indigenous peoples organizations, local governments, municipal authorities and intergovernmental and regional organizations, as well as research and independent, trade union, women and gender, youth and faith-based NGOs.

13. The Conference of the Parties convened a high-level event on global climate action, which provided opportunities for strengthening high-level engagement in the implementation of policy options and climate action, for taking stock of progress in sectoral breakthroughs derived from the Climate Action Pathways and in the Race to Zero and Race to Resilience campaigns, and for effective high-level engagement of dignitaries of the parties, international organizations and non-party stakeholders.

14. Under the guidance of the Presidency, two high-level events on climate finance were convened during the Conference: the fourth high-level ministerial dialogue on long-term climate finance and the first high-level ministerial dialogue on arrangements related to article 9, paragraph 5, of the Paris Agreement. The dialogues brought together ministers of environment, finance and development and senior officials and heads of multilateral and bilateral finance institutions and the private sector.

15. In considering the climate finance delivery plan developed by Germany and Canada, which was recognized as contributing to enhanced transparency and predictability, participants expressed disappointment at the failure of developed countries to deliver the $100 billion goal, which had resulted in a lack of trust by developing countries. The dialogue on long-term climate finance, in particular, provided space for making and recognizing announcements and pledges by developed countries to increase their public climate finance contributions beyond current levels. Most notably, the record financial contributions for the Adaptation Fund announced prior to the dialogue were recognized as a critical step towards increasing the

predictability and clarity of adaptation finance, while it was also recognized that finance for adaptation continued to lag behind mitigation finance. Participants also discussed the need for scaled-up and accessible finance to meet the needs and priorities of developing countries.

16. The dialogue on arrangements related to article 9, paragraph 5, of the Paris Agreement provided a forum for exchanging views on progress towards enhancing predictability and clarity in the mobilization and delivery of climate finance to developing countries. Participants discussed future trends in climate finance mobilization, including the need for increased flows from all sources, notably for adaptation, and efforts to make finance flows consistent with a path towards low greenhouse gas emissions and climate-resilient development.

3. Outcomes of the twenty-sixth session of the Conference of the Parties

17. The following decisions were adopted:

(a) 1/CP.26: Glasgow Climate Pact;

(b) 2/CP.26: Report of the Adaptation Committee (for 2019, 2020 and 2021);

(c) 3/CP.26: National adaptation plans;

(d) 4/CP.26: Long-term climate finance;

(e) 5/CP.26: Matters relating to the Standing Committee on Finance;

(f) 6/CP.26: Report of the Green Climate Fund to the Conference of the Parties and guidance to the Green Climate Fund;

(g) 7/CP.26: Report of the Global Environment Facility (GEF) to the Conference of the Parties and guidance to GEF;

(h) 8/CP.26: Compilation and synthesis of, and summary report on the in-session workshop on, biennial communications of information related to article 9, paragraph 5, of the Paris Agreement;

(i) 9/CP.26: Enhancing climate technology development and transfer through the Technology Mechanism;

(j) 10/CP.26: Review of the constitution of the Advisory Board of the Climate Technology Centre and Network;

(k) 11/CP.26: Second review of the Climate Technology Centre and Network;

(l) 12/CP.26: Annual technical progress reports of the Paris Committee on Capacity-building for 2020 and 2021;

(m) 13/CP.26: Fifth review of the implementation of the framework for capacity-building in countries with economies in transition under the Convention;

(n) 14/CP.26: Revised terms of reference of the Consultative Group of Experts;

(o) 15/CP.26: Extension of the mandate of the Least Developed Countries Expert Group;

(p) 16/CP.26: Local Communities and Indigenous Peoples Platform;

(q) 17/CP.26: Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts;

(r) 18/CP.26: Glasgow work programme on Action for Climate Empowerment;

(s) 19/CP.26: Matters relating to the forum on the impact of the implementation of response measures;

(t) 20/CP.26: Gender and climate change;

(u) 21/CP.26: Dates and venues of future sessions;

(v) 22/CP.26: Programme budget for the biennium 2022–2023;

(w) 23/CP.26: Administrative, financial and institutional matters.

4. Outcomes of the sixteenth session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol

18. The following decisions were adopted:

(a) 1/CMP.16: Glasgow Climate Pact;

(b) 2/CMP.16: Guidance relating to the clean development mechanism;

(c) 3/CMP.16: Report of the Adaptation Fund Board for 2020 and 2021;

(d) 4/CMP.16: Fourth review of the Adaptation Fund;

(e) 5/CMP.16: Fourth comprehensive review of the implementation of the framework for capacity-building in developing countries under the Kyoto Protocol;

(f) 6/CMP.16: Fifth review of the implementation of the framework for capacity-building in countries with economies in transition under the Kyoto Protocol;

(g) 7/CMP.16: Matters relating to the forum on the impact of the implementation of response measures;

(h) 8/CMP.16: Programme budget for the biennium 2022–2023;

(i) 9/CMP.16: Budget for the international transaction log;

(j) 10/CMP.16: Administrative, financial and institutional matters.

5. Outcomes of the third session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement

19. The following decisions were adopted:

(a) 1/CMA.3: Glasgow Climate Pact;

(b) 2/CMA.3: Guidance on cooperative approaches referred to in article 6, paragraph 2, of the Paris Agreement;

(c) 3/CMA.3: Rules, modalities and procedures for the mechanism established by article 6, paragraph 4, of the Paris Agreement;

(d) 4/CMA.3: Work programme under the framework for non-market approaches referred to in article 6, paragraph 8, of Paris Agreement;

(e) 5/CMA.3: Guidance for operationalizing the modalities, procedures and guidelines for the enhanced transparency framework referred to in article 13 of the Paris Agreement;

(f) 6/CMA.3: Common time frames for nationally determined contributions referred to in article 4, paragraph 10, of the Paris Agreement;

(g) 7/CMA.3: Glasgow-Sharm el-Sheikh work programme on the global goal on adaptation;

(h) 8/CMA.3: Report of the Adaptation Committee for 2019, 2020 and 2021;

(i) 9/CMA.3: New collective quantified goal on climate finance;

(j) 10/CMA.3: Matters relating to the Standing Committee on Finance;

(k) 11/CMA.3: Guidance to the Green Climate Fund;

(l) 12/CMA.3: Guidance to the Global Environment Facility;

(m) 13/CMA.3: Matters relating to the Adaptation Fund;

(n) 14/CMA.3: Compilation and synthesis of, and summary report on the in-session workshop on, biennial communications of information related to article 9, paragraph 5, of the Paris Agreement;

(o) 15/CMA.3: Enhancing climate technology development and transfer to support implementation of the Paris Agreement;

(p) 16/CMA.3: Alignment between processes pertaining to the review of the Climate Technology Centre and Network and the periodic assessment referred to in paragraph 69 of decision 1/CP.21;

(q) 17/CMA.3: First periodic assessment referred to in paragraph 69 of decision 1/CP.21;

(r) 18/CMA.3: Annual technical progress reports of the Paris Committee on Capacity-building for 2020 and 2021;

(s) 19/CMA.3: Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts;

(t) 20/CMA.3: Modalities and procedures for operation and use of a public registry referred to in article 4, paragraph 12, of the Paris Agreement;

(u) 21/CMA.3: Modalities and procedures for the operation and use of a public registry referred to in article 7, paragraph 12, of the Paris Agreement;

(v) 22/CMA.3: Glasgow work programme on Action for Climate Empowerment;

(w) 23/CMA.3: Matters relating to the forum on impact of the implementation of response measures;

(x) 24/CMA.3: Rules of procedure of the committee to facilitate implementation and promote compliance referred to in article 15, paragraph 2, of the Paris Agreement.

6. Conclusions/recommendations

20. The General Assembly may wish:

(a) To welcome the outcomes of the twenty-sixth session of the Conference of the Parties, the sixteenth session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol and the third session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement, presided over by the Government of the United Kingdom, held in Glasgow, from 31 October to 13 November 2021;

(b) To urge parties to the Convention that have not yet ratified the Paris Agreement to expedite their domestic procedures and to promptly deposit their instruments of ratification, acceptance, approval or accession, where appropriate, in order to ensure its universality;

(c) To urge parties to revisit and strengthen the 2030 targets in their nationally determined contributions and to respond swiftly to the calls for enhanced climate action in the Glasgow Climate Pact;

(d) To call upon parties which have not yet submitted their long-term low-emissions development strategies, national adaptation plans or adaptation communications to accelerate work on their preparation and submit them to the secretariat of the United Nations Framework Convention on Climate Change;

(e) To invite the Executive Secretary to continue to report to it on the work of the Conference of the Parties, the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol and the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement.

II. Report of the Executive Secretary of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa

A. Introduction

21. In its resolution 76/206, the General Assembly requested the Secretary-General to submit to the Assembly at its seventy-seventh session a report on the implementation of the resolution.

B. Outcome of the fifteenth session of the Conference of the Parties to the Convention

22. The fifteenth session of the Conference of the Parties and its subsidiary bodies was held in Abidjan, Côte d'Ivoire, from 9 to 20 May 2022. The Conference was attended by more than 7,000 participants, including representatives of 133 parties to the Convention, 23 United Nations entities, 33 intergovernmental and 116 civil society organizations and more than 54 ministers and Heads of State.

1. Summit of the Heads of State and Government

23. On the invitation of the President of Côte d'Ivoire, a summit of Heads of States and Government was held on 9 May 2022. The summit was attended by several Heads of State and Government, the President of the General Assembly, the Deputy Secretary-General and the Chairman of the African Union, as well as special envoys of presidents and representatives of civil society organizations. Parties to the Convention also attended at the highest political level.

24. The objective of the summit was to infuse political momentum into the deliberations of the parties and advance drought preparedness and land restoration as essential commitments to accelerate progress towards achieving Sustainable Development Goal target 15.3 and national voluntary land degradation neutrality targets. The summit adopted the Abidjan Call, in which leaders urged giving the highest priority to the issue of drought and reinforcing the commitment towards achieving land degradation neutrality by 2030. The Call also aimed at raising ambition for investments in large-scale land restoration projects and programmes, which also help countries and communities prepare for and mitigate the impacts of drought. The Government of Cote d'Ivoire also presented its Abidjan Legacy Programme, an ambitious multi-partner initiative aimed at boosting long-term environmental sustainability across major commodity value chains while protecting and restoring forests and lands and improving communities' resilience to climate change.

2. Gender Caucus

25. Hosted by the First Lady of Cote d'Ivoire, with the participation of the Deputy Secretary-General, the former President of Finland, high-level representatives of United Nations agencies and national institutions, the high-level event took place on 9 May 2022. After the opening, two sessions co-chaired by Canada and Côte d'Ivoire

were held focusing on the Gender Caucus structure and future priorities and sharing promising practices and local solutions. The Caucus aimed at providing a space to enhance knowledge, including by providing new evidence on issues affecting women in the context of desertification, land degradation and drought, among policymakers attending the Conference of the Parties, civil society, international development actors and all other participants. The Caucus issued the Abidjan Declaration on Achieving Gender Equality for Successful Land Restoration. It called for strengthening efforts to promote gender equality as a means of accelerating land restoration by, inter alia, strengthening and enforcing legal frameworks for women's access to land and control over land and actively working to close the gender gap.

3. Proceedings and key outcomes of the Conference of the Parties

26. On 10 May, a ministerial segment was organized, which included two interactive dialogues and three parallel high-level round tables. The ministerial segment adopted the Land, Life and Legacy Declaration. Two open dialogues were also organized. Two themes featured in the discussions, namely, "Lands we use, lands we protect, lands we own – opportunities and solutions to equity and equality" and "Agroecological approaches and regenerative agricultural practices as a solution to positive transformative change, achieving land degradation neutrality and addressing desertification, land degradation and drought issues".

27. The Conference of the Parties adopted 37 decisions and 1 resolution during the session. This included decision 7/COP.15, in which the Conference of the Parties acknowledged the importance of the 2018–2030 Strategic Framework of the Convention and established an intergovernmental working group to oversee the midterm evaluation process and present its findings and recommendations to the parties for their consideration at the sixteenth session of the Conference of the Parties. Other important decisions included 13/COP.15, in which the Conference of the Parties recognized that Sustainable Development Goal target 15.3 and the setting of voluntary land degradation neutrality targets had created a strong momentum for the implementation of the Convention. and called for the conduct of a needs assessment to determine the financial requirements for the implementation of the Convention.

28. In decision 12/COP.15, the Conference of the Parties acknowledged the pivotal role that the Land Degradation Neutrality Fund could play in achieving the strategic objectives of the Convention and serving as a successful, replicable model of collaboration between the public and private sector and called for the provision of technical pre-investment support to country project developers. The Conference of the Parties also welcomed the support provided by the secretariat in effectively assisting countries in their voluntary land degradation neutrality target-setting and called for assistance to parties in developing the necessary tools to translate the voluntary land degradation neutrality targets into concrete actions and identifying innovative resources for promoting the development of large-scale national, multi-country and subregional transformative projects.

29. Taking into consideration the urgency of the problems and consequences related to drought worldwide, the parties assessed the way forward for drought preparedness and resilience globally, including: (a) concrete commitments to pursue effective policy and advocacy, impact mitigation measures, capacity-building, partnerships and sharing of knowledge and experience; (b) the scaling up of drought impact mitigation in development efforts – early warning, monitoring, response, resilience-building and sustainable recovery; (c) options for strengthened institutional arrangements, effective collaboration, coordination and increased investments in drought risk mitigation measures and for the secretariat of the Convention to take the lead on drought matters at the global level.

30. The Conference of the Parties adopted decision 23/COP.15, by which it established a new Intergovernmental Working Group on Drought during the triennium 2022–2024 to identify and evaluate all options to effectively manage drought under the Convention, including supporting a shift from reactive to proactive drought management.

31. The Conference of the Parties also addressed the issue of sand and dust storms. In its decision 26/COP.15, it urged a proactive approach to enhance cooperation at all levels to address the causes and impacts of sand and dust storms and called for the organization of a science-policy dialogue to develop guidance and policies to address sand and dust storms.

32. The Conference of the Parties also decided that a youth engagement strategy would be developed to ensure stronger, effective and meaningful participation of youth in the meetings and processes of the Convention.

C. Global celebration of World Day to Combat Desertification and Drought and outreach activities

33. Declared by the General Assembly in 1995, the World Day to Combat Desertification and Drought is observed every year on 17 June to promote public awareness of international efforts to combat desertification, land degradation and drought.

34. This year the global celebrations took place against the backdrop of severe droughts in the Horn of Africa, Chile, China, Mexico, Morocco and the United States of America, and its theme “Rising up from drought together” was intended to galvanize action to better prepare and respond to growing drought worldwide and build long-term resilience.

35. The global observance was hosted by Spain and included a high-level event at the Reina Sofia Museum in Madrid on 17 June. Among the notable speakers were the Secretary-General, the President of Spain, the President of the fifteenth session of the Conference of the Parties, the Executive Secretary of the Convention and Patricia Kombo, Land Hero from Kenya.

36. As part of the global drought land campaign launched by the secretariat of the Convention in the lead-up to the celebrations, an information booth was set up in the centre of Madrid to raise public awareness of the impacts of drought. In addition, an event was organized by the Biodiversity Foundation in cooperation with the Basque Culinary Centre which brought together top chefs and experts to discuss the challenges of food production in drought-prone areas. An opinion piece co-authored by the Vice-President of Spain and the Executive Secretary of the Convention was also published in several Spanish media outlets.

37. Other commemorative events took place across the world, with over 40 events in 35 countries.

D. Status of land restoration on the path to achieving land degradation neutrality

38. The second edition of *Global Land Outlook* was published ahead of the Conference of the Parties, generating scientific evidence and political momentum on the importance of accelerating action to address land degradation. The report indicated that up to 40 per cent of the planet’s land is degraded, directly affecting half of humanity and threatening nearly half of global gross domestic product ($44 trillion).

39. In the report, it is projected that, if business continues as usual, there will be additional degradation of an area almost the size of South America by 2050. To achieve climate and biodiversity goals and to guarantee water and food security, degraded land must be restored and global land-based solutions must be implemented on a massive scale.

40. Globally, 129 countries have pledged to establish national voluntary targets and relevant measures to achieve land degradation neutrality by 2030. One hundred and seven parties have successfully completed this voluntary process and 100 have already published their national reports on the website of the Convention.

41. A second phase of the target-setting programme for land degradation neutrality is also under way and will assist countries that have already set voluntary national targets to review, evaluate and refine their targets. Tools will be made available to aid practical land-use decision-making by drawing on geospatial technology and land-use planning tools and by helping to ensure that targets are gender-responsive and time-bound.

42. Since 2018, 74 countries have participated in transformative projects and programmes and are aiming to develop national, regional or subregional projects (65 concept notes in total) to implement comprehensive processes to achieve land degradation neutrality. The transformative projects and programmes workstream and portfolio to date includes:

(a) Fifty-nine national projects involving 55 countries (19 national project concept notes have been developed, 7 are under development and 33 are still to be developed);

(b) Six regional or multi-country projects involving 41 countries (3 regional concept notes have been developed, 2 are under development and 1 is still to be developed).

43. The cumulative total of 22 concept notes that have been developed. To date 10 project concept notes have been approved to access development funds (9 national concept notes and 1 regional concept note). This includes three projects that are now under implementation.

44. The leaders of the Group of 20, meeting virtually in November 2020, adopted a Leader's Declaration committing to the achievement of a 50 per cent reduction of degraded land by 2040 on a voluntary basis and launched the Global Initiative on Reducing Land Degradation and Enhancing Conservation of Terrestrial Habitats to prevent, halt and reverse land degradation. This will support the sharing of knowledge and best practices by showcasing publicly available data and information on degraded lands and conservation/restoration efforts. The Initiative will enhance support for the implementation of current commitments for sustainable land management and restoration and seek additional voluntary commitments from participating countries. To facilitate implementation, an Initiative Coordination Office, hosted by the secretariat of the Convention, has been established and a workplan is being developed. Early activities are also being implemented in Indonesia, under the Group of 20 Presidency.

E. Latest developments on drought policies

45. Over the past two years, the secretariat has supported over 70 countries in developing and implementing targeted national drought plans focused on preparedness, response and resilience. Through the interactive Drought Toolbox, people and communities anywhere in the world can access multiple case studies and other resources.

F. Collaboration with the Global Environment Facility

46. The collaboration between the secretariats of GEF and the Convention has continued to advance steadily. Representatives of the secretariat of the Convention participated in the two most recent meetings of the Council of GEF and were closely involved in the discussions on the eighth replenishment of GEF.

47. Representatives of the secretariat of GEF attended the fifteenth session of the Conference of the Parties, where they presented the report of GEF on the support provided to parties to fund implementation activities. Heeding the call made by the General Assembly to ensure a robust replenishment of GEF in general and the land degradation focal area in particular, GEF donors increased resources allocated to this focal area. The land degradation focal area has been increased by 30 per cent, reaching $618 million. In its decision 9/COP15, the Conference of the Parties welcomed the strong eighth replenishment of GEF and the robust increase in land degradation focal area resources. The Conference of the Parties provided GEF with strong guidance on drought. It requested GEF, within its mandate, to support the implementation of the national drought plans and other drought-related policies, especially with respect to strengthening early warning, preparedness, mitigation and recovery, rehabilitation and monitoring systems and capacity-building. It also invited GEF, within its mandate, to assess the feasibility of establishing a focal area for drought to increase the visibility and financial resources allocated to drought.

G. Partnerships

48. The secretariat of the Convention has a variety of partnerships with organizations and institutions that have convergent or complementary missions to address desertification, land degradation and drought. The number of parties that have completed their voluntary land degradation neutrality target-setting and national drought plans has increased, leading to a growing demand for assistance with the preparation of investment-ready project proposals. The secretariat has been supporting parties in this regard and, to date, 65 requests for support and project ideas have been submitted for further development into project concept notes and proposals. To meet this growing demand for project preparation support, the secretariat is establishing strategic partnerships with relevant agencies, including to address financing to support project preparation. To that end, a project preparation partnership was launched at the fifteenth session of the Conference of the Parties to serve as a global clearing house. It will work with a range of partners to support the preparation and funding of projects addressing desertification, land degradation and drought, land tenure, land governance and other land-based issues, with a focus on encouraging gender responsiveness and assisting the most vulnerable populations.

49. To support private sector investment decisions, a partnership has been forged with the World Business Council for Sustainable Development in the development of a business investment approach to soil health. The approach involves three stages: (a) assessment; (b) identification of investment targets; and (c) development of an investment plan, including monitoring and reporting. The work also includes a toolkit for the private sector with step-by-step guidance to integrate soil health into investment decisions.

50. Partnerships have also been established with the private sector and other stakeholders in developing the Great Green Wall Sourcing Challenge launched during the Green Business Forum of the Conference of the Parties and supporting the World Economic Forum’s Trillion Trees: the Sahel and the Great Green Wall – Uplink challenge.

H. Observations and recommendations

51. Sustainable Development Goal target 15.3 and the setting of voluntary land degradation neutrality targets have created a strong momentum for the implementation of the Convention. Land restoration is taking root in all regions. The international community is witnessing the beginning of a large-scale land restoration movement. Restoring degraded lands generates revenue for poor populations, brings more food to the hungry and to the markets, restores ecosystems and biodiversity and enhances resilience to the climate crisis by sequestering huge quantities of carbon from the atmosphere and bringing carbon where it belongs, in the soil. In this respect, the Conference of the Parties committed to accelerating the restoration of one billion hectares of degraded land by 2030 by improving data-gathering and monitoring to track progress against the achievement of land restoration commitments and establishing a new partnership model for large-scale integrated landscape investment programmes.

52. The Conference of the Parties decided to boost drought resilience by identifying the expansion of drylands; improving national policies and early warning, monitoring and assessment; learning and sharing knowledge; building partnerships and coordinating action; and mobilizing drought finance to support a shift from reactive to proactive drought management.

53. The General Assembly may wish to take note of the progress made in large-scale land restoration and support the policy changes on addressing drought. It may also wish to encourage Member States to address forced migration and displacement driven by desertification and land degradation by creating social and economic opportunities that increase rural resilience and livelihood stability and by mobilizing resources, including from the diaspora, for land restoration projects. The Assembly may also wish to support the decision by the Conference of the Parties to improve women's involvement in land management as important enablers for effective land restoration, by addressing commonly encountered land tenure challenges by people in vulnerable situations and collecting gender-disaggregated data on the impacts of desertification, land degradation and drought. Finally, the Assembly may wish to send a strong message to youth and support the decision of the Conference of the Parties on promoting decent land-based jobs for youth and land-based youth entrepreneurship and strengthening youth participation in the Convention processes.

III. Report of the Executive Secretary of the Convention on Biological Diversity

A. Introduction

54. In its resolution 76/207 on the implementation of the Convention on Biological Diversity and its contribution to sustainable development, the General Assembly requested the Secretary-General to report to the Assembly at its seventy-seventh session on the implementation of the resolution, including on the potential link between coronavirus disease (COVID-19) and biodiversity and the implications and recommendations for building back better.

B. Part I of the fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity

55. Part I of the fifteenth meeting of the Conference of the Parties was held in Kunming, China, from 11 to 15 October 2021, with the participation of several global leaders, including the Presidents of China, Costa Rica, Egypt, France and the Russian

Federation, the Prime Minister of Papua New Guinea and the Secretary-General, and over 2,918 delegates, civil society organizations and other stakeholders. The high-level segment was convened on 12 and 13 October 2021. The parties committed to negotiating an effective post-2020 global biodiversity framework that could bend the curve of biodiversity loss. A number of important initiatives and commitments to fast-track the implementation of the post-2020 global biodiversity framework were also announced, including the establishment of the Kunming Biodiversity Fund and an extension of funding for the Japan Biodiversity Fund. A coalition of financial institutions, with assets of over €12 trillion, also announced commitments to protect and restore biodiversity through its activities and investments. GEF, in partnership with the United Nations Development Fund and the United Nations Environment Programme, announced that it would provide financial and technical support to developing countries to fast-track preparations for the rapid implementation of the post-2020 global biodiversity framework. Part I of the fifteenth meeting of the Conference of the Parties also set the stage for the further development and finalization of the post-2020 global biodiversity framework, addressed critical areas of work, adopted an interim integrated budget for 2022 for the Convention and its Protocols and reviewed progress by the Open-ended Working Group on the Post-2020 Global Biodiversity Framework.

C. Preparations for part II of the fifteenth meeting of the Conference of the Parties to the Convention

56. Part II of the fifteenth meeting of the Conference of the Parties is to be held in Montreal, Canada, from 5 to 17 December 2022, under the leadership of China, as President of the meeting, with the logo and the theme of the fifteenth meeting maintained. It will include a high-level segment to be convened and led by China. To prepare for part II of the meeting and contribute to the post-2020 global biodiversity framework, meetings of the Convention's subsidiary bodies have been held.

1. Part II of the twenty-fourth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice

57. Part II of the twenty-fourth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice met in person in Geneva from 14 to 27 March 2022. It was among the most highly attended meetings of the Subsidiary Body, with more than 1,100 participants from 151 parties and over 800 participants from civil society organizations and other stakeholders in attendance.

58. At the meeting, the Subsidiary Body built on its work at the informal meeting held in February 2021 and its first formal session held in May-June 2021, both of which were held virtually. By the end of the first formal session, all the agenda items had been reviewed through a first-round exchange of views. Seven plenary sessions were held, interspersed with meetings of contact groups. By the end of the meeting, the Subsidiary Body had adopted 10 recommendations to be considered at part II of the fifteenth meeting of the Conference of the Parties, including a recommendation on the proposed monitoring framework for the post-2020 global biodiversity framework and nine other recommendations addressing, inter alia, the fifth edition of the *Global Biodiversity Outlook*; the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services; synthetic biology; soil biodiversity; biodiversity and health; invasive alien species; the conservation and sustainable use of marine and coastal biodiversity; and ecologically or biologically significant marine areas. The Subsidiary Body also prepared one recommendation to the Conference of the Parties serving as the Meeting of the Parties to the Cartagena Protocol on risk assessment and risk management.

59. The Subsidiary Body also requested the Executive Secretary to organize a technical meeting on indicators for the post-2020 global biodiversity framework, (recommendation 24/2) and to facilitate consultations on the conservation and sustainable use of marine and coastal biodiversity and on ecologically or biologically significant marine areas (recommendations 24/9 and 24/10), prior to part II of the fifteenth meeting of the Conference of the Parties.

2. Part II of the third meeting of the Subsidiary Body on Implementation

60. Part II of the third meeting of the Subsidiary Body on Implementation was held in person in Geneva from 14 to 29 March 2022. The meeting concluded the work initiated at part I of the third meeting, which was held online in May-June 2021. Parties adopted 19 recommendations, many of which will be crucial for the swift implementation of the post-2020 global biodiversity framework and ensuring that agreements are turned into action on the ground.

61. The results of the meeting will contribute to the next round of discussions on the new framework, especially on issues relating to mobilization of resources for biodiversity, a mechanism to review the implementation of the new framework, and communications and gender in the context of the implementation of the post-2020 global biodiversity framework. Delegates also adopted key recommendations on enabling conditions, responsibility and transparency, capacity-building and development, knowledge management, technology and technology transfer, as well as options to enhance planning, reporting and review, mainstreaming, a new gender plan of action and a new strategy for communications, outreach and cooperation.

62. In addition, delegates reviewed progress in the implementation of the Cartagena Protocol on Biosafety and the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits, as well as the work of the Ad Hoc Open-ended Intersessional Working Group on Article 8 (j) and Related Provisions related to traditional knowledge.

63. The recommendations approved by the Subsidiary Body will be further considered at part II of the fifteenth meeting of the Conference of the Parties.

3. Preparations for fourth meeting of the Conference of the Parties serving as the Meeting of the Parties to the Nagoya Protocol

64. Preparations for the fourth meeting of the Conference of the Parties serving as the Meeting of the Parties to the Protocol are well under way. Three preparatory meetings took place concurrently in person in Geneva in March 2022, following a first preparatory meeting, which was held virtually in 2021. The third meeting of the Subsidiary Body on Implementation allowed parties to the Protocol to exchange views on key topics for the fourth meeting of the Conference of the Parties serving as the Meeting of the Parties to the Nagoya Protocol, including consideration of specialized international access and benefit-sharing instruments in the context of article 4, paragraph 4, of the Nagoya Protocol and on a global multilateral benefit-sharing mechanism (article 10 of the Nagoya Protocol). In addition, the twenty-fourth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice advanced consideration of elements contributing to the post-2020 global biodiversity framework, which will also guide the post-2020 implementation of the Nagoya Protocol. Lastly, the third and fourth meetings of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework made good progress towards a solution for the fair and equitable sharing of benefits from digital sequence information on the use of genetic resources.

65. Moreover, to further inform the parties and move towards resolving the divergence of views among them, an informal co-chairs' advisory group on digital

sequence information on genetic resources was established and held five sessions between September and November 2021.

66. A campaign to raise awareness on access and benefit-sharing and on the contribution of access and benefit-sharing to sustainable development was held between October 2021 and April 2022 on five social media platforms. This resulted in four interviews held with key partners and significant visibility and engagement on social media on access and benefit-sharing and on digital sequence information.

4. Preparations for tenth meeting of the Conference of the Parties serving as the Meeting of the Parties to the Cartagena Protocol on Biosafety

67. Part I of the tenth meeting of the Conference of the Parties serving as the Meeting of the Parties to the Cartagena Protocol was held online from 11 to 15 October 2021. Part II will be held in person in December 2022.

68. A total of 132 parties to the Cartagena Protocol attended part I of the meeting. The Conference of the Parties serving as the Meeting of the Parties to the Cartagena Protocol decided to address only two substantive matters: the report of the compliance committee, which was noted for further deliberation at part II of the meeting, and decision CP-10/1 on the budget for the integrated programme of work of the secretariat.

69. Issues relating to the Cartagena Protocol also came up at part II of the third meeting of Subsidiary Body on Implementation, which adopted recommendations relating to the post-2020 implementation plan and capacity-building action plan, as well as the fourth assessment and review of the Cartagena Protocol. At its twenty-fourth meeting, the Subsidiary Body on Scientific, Technical and Technological Advice also considered some issues relating to the Cartagena Protocol and made recommendations on a programme of work on risk assessment and risk management, which will be considered during part II of the tenth meeting of the Conference of the Parties serving as the Meeting of the Parties to the Cartagena Protocol.

5. Update on the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety

70. The Supplementary Protocol entered into force on 5 March 2018. Issues relating to the implementation of the Supplementary Protocol will be considered at part II of the tenth meeting of the Conference of the Parties serving as the Meeting of the Parties to the Cartagena Protocol. Only parties to the Supplementary Protocol will be involved in the decision-taking process, pursuant to article 14, paragraph 1, of the Supplementary Protocol. One of the major issues that will be taken up is a study on financial security mechanisms under the Supplementary Protocol that has been peer reviewed and finalized during the period under review.

D. Preparations for the post-2020 global biodiversity framework

71. Since its inception, the Open-ended Working Group on the Post-2020 Global Biodiversity Framework has met four times. The first meeting was held in August 2019 in Nairobi and the second was held in February 2020 in Rome. The Working Group held its third meeting in two parts in order to advance the work despite the then-ongoing COVID-19 pandemic. The first part was held virtually from 23 August to 3 September 2021; the second part was held in a hybrid format in Geneva, from 14 to 29 March 2022, in conjunction and concurrently with the resumed sessions of twenty-fourth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice and the third meeting of the Subsidiary Body on Implementation. The fourth meeting of the Working Group was held in Nairobi from 21 to 26 June 2022 in Nairobi.

The fifth meeting will be held in Montreal, Canada, just before part II of the fifteenth meeting of the Conference of the Parties in December 2022.

72. In January 2020, the Co-Chairs of the Working Group, with the support of the secretariat, launched the zero draft of the post-2020 global biodiversity framework. The draft was updated and revised to take into account comments and inputs from parties and stakeholders and issued as the first draft of the framework in July 2020. The first draft served as the basis for negotiations during the third meeting of the Working Group. At the second part of the third meeting of the Working Group, parties and stakeholders significantly advanced the draft text of the framework, with further refinements to the text being made at the fourth meeting, in June 2022. Following planned intersessional work, the Working Group will meet for a fifth and final time immediately before the start of part II of fifteenth meeting of the Conference of the Parties, to finalize the draft framework for adoption by the Conference of the Parties.

73. At the second part of the third meeting and the fourth meeting, the Working Group also made significant progress on the issue of digital sequence information on genetic resources, and a decision on this issue is expected to be adopted at part II of the fifteenth meeting of the Conference of the Parties.

74. As the text of the post-2020 global biodiversity framework is being negotiated, important work is being undertaken by the Subsidiary Body on Scientific, Technical and Technological Advice and the Subsidiary Body on Implementation to produce a robust monitoring framework and review mechanism. It is envisaged that this mechanism will enhance transparency and responsibility by enabling periodic joint stocktaking of progress towards the goals and targets of the post-2020 global biodiversity framework.

75. Given the delays in implementing the previous Strategic Plan for Biodiversity 2011–2020 and to make up for time lost owing to the COVID-19 pandemic, there is an urgent need for early, inclusive and effective implementation of post-2020 framework as soon as it is adopted. Significant resources will be required to achieve this, including financial, capacity-building and development, knowledge management, technical and scientific cooperation and technology transfer resources. Envisaged as a framework for all, the success of the post-2020 global biodiversity framework will rely on universal implementation and effective engagement of all stakeholders across government and society in a whole-of-government and whole-of-society approach.

E. Follow up to General Assembly resolution 76/207

76. The issue of the interlinkages between biodiversity and health was taken up at part I of the fifteenth meeting of the Conference of the Parties and by the subsidiary bodies. At part I of the fifteenth meeting, ministers and heads of delegations committed to increasing the application of ecosystem-based approaches to address biodiversity loss, promote health and contribute to addressing other challenges and enhancing the One Health approach and other holistic approaches. They also committed to ensuring that post-pandemic recovery policies, programmes and plans contribute to the conservation and sustainable use of biodiversity and promote sustainable and inclusive development.

77. The Subsidiary Body on Scientific, Technical and Technological Advice considered an agenda item on biodiversity and health and a draft global action plan on biodiversity and health and made recommendations on actions relating to preparation of targeted messages and an updated draft global action plan, which will be considered at part II of the fifteenth meeting.

78. In addition, the secretariat of the Convention on Biological Diversity contributed to the establishment of a multi-partner trust fund, the Nature for Health

Fund, which will support fast-tracked implementation of the global action plan on biodiversity and health to be developed under the Convention on Biological Diversity. The Fund brings together United Nations agencies, intergovernmental organizations and civil society groups in the field of environment and health. Following the announcement of the establishment of the Fund at the resumed fifth session of the United Nations Environment Assembly, the secretariat of the Convention is actively engaged in the inception phase being led by consortium partners.

79. The secretariat of the Convention also contributed to the consultative process on COVID-19 and the environment led by the United Nations Environment Management Group and its subsequent report, entitled "Inclusive green recovery: an essential post-COVID-19 paradigm shift to recover better". The report sets out five priority areas for a green recovery. The secretariat of the Convention continues to raise the importance of a biodiversity-inclusive One Health approach, through continued engagement with its partners across the health-environment nexus. The secretariat is also following meetings of the intergovernmental negotiating body to draft and negotiate a World Health Organization convention, agreement or other international instrument on pandemic prevention.

F. International Day for Biological Diversity

80. The International Day for Biological Diversity was commemorated on 22 May 2022 under the slogan "Building a shared future for all life". Building on the 2020 and 2021 themes, "Our solutions are in nature" and "We're part of the solution #ForNature", respectively, the 2022 campaign was a call to action and it communicated the importance of the post-2020 global biodiversity framework in delivering transformative change. As part of a comprehensive communications strategy, several days leading up to and following the Day were dedicated to 22 specific actions by individuals, businesses, cities, peacebuilders, athletes and others. A number of commemorative events were organized at the national and global level by 152 parties, 13 United Nations entities and 25 other organizations.

81. Convention on Biological Diversity social media accounts shared a total of 519 posts in the week leading up to International Day for Biodiversity, resulting in 2 million impressions. As expected during the annual observance of the Day, content reach far exceeded average figures, while engagement rates were equal to or better than long-term averages.

82. The communications assets created for the Day were a hit with social media users. Posts sharing the logo customization tool and the downloadable posters and virtual meeting backgrounds performed well in terms of both reach and engagement and across several platforms. A Trello board was created to share these and other materials and messaging with the biodiversity communications flotilla group and other partners, helping to amplify the campaign beyond what was shared on Convention platforms.

G. Status of ratifications of the Convention on Biological Diversity and its Protocols

83. The present status of ratification of the Convention and its Protocols is as follows:

(a) Convention on Biological Diversity: 195 States and 1 regional economic integration organization have deposited their instruments of ratification, accession, acceptance, approval or succession;

(b) Cartagena Protocol on Biosafety to the Convention on Biological Diversity: 172 States and 1 regional economic integration organization have deposited their instruments of ratification, accession, acceptance, approval or succession;

(c) Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity: 136 States and 1 regional economic integration organization have deposited their instruments of ratification, accession, acceptance, approval or succession;

(d) Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety: 48 parties and 1 regional economic integration organization have deposited their instruments of ratification, accession, acceptance, approval or succession.

H. Recommendations

84. The General Assembly may wish:

(a) To call on all parties to the Convention, United Nations agencies and all other stakeholders to effectively engage in the negotiations of the post-2020 global biodiversity framework to ensure that it is transformative, innovative and ambitious in order to halt and reverse the loss of biodiversity, and to fast track the framework's implementation once it is adopted;

(b) To call on all Member States that have not yet done so to ratify or accede to the Convention on Biological Diversity;

(c) To call on all parties to the Convention that have not yet done so to ratify or accede to the Cartagena Protocol on Biosafety and the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety;

(d) To call on all parties to the Convention that have not yet done so to ratify or accede to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity.

United Nations A/RES/77/166

General Assembly

Distr.: General
21 December 2022

Seventy-seventh session
Agenda item 18 (e)
Sustainable development: implementation of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa

Resolution adopted by the General Assembly on 14 December 2022

[*on the report of the Second Committee (A/77/443/Add.5, para. 8)*]

77/166. Implementation of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa

The General Assembly,

Recalling its resolution 76/206 of 17 December 2021, as well as other resolutions relating to the implementation of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa,[1]

Reaffirming its resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development", in which it adopted a comprehensive, far-reaching and people-centred set of universal and transformative Sustainable Development Goals and targets, its commitment to working tirelessly for the full implementation of the Agenda by 2030, its recognition that eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development, and its commitment to achieving sustainable development in its three dimensions – economic, social and environmental – in a balanced and integrated manner and to building upon the achievements of the Millennium Development Goals and seeking to address their unfinished business,

Recalling that, in the 2030 Agenda, the international community committed to combating desertification, restoring degraded land and soil, including land affected

[1] United Nations, *Treaty Series*, vol. 1954, No. 33480.

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by desertification, drought and floods, and striving to achieve a land degradation-neutral world by 2030,

Reaffirming its resolution 69/313 of 27 July 2015 on the Addis Ababa Action Agenda of the Third International Conference on Financing for Development, which is an integral part of the 2030 Agenda for Sustainable Development, supports and complements it, helps to contextualize its means of implementation targets with concrete policies and actions, and reaffirms the strong political commitment to address the challenge of financing and creating an enabling environment at all levels for sustainable development in the spirit of global partnership and solidarity,

Recognizing that Sustainable Development Goal targets 15.3, 6.1 and 6.6 and the setting of voluntary land degradation neutrality targets have created strong momentum for accelerating the implementation of the Convention,

Noting that restoring degraded lands generates benefits for poor populations, brings more food to the hungry and to the markets, restores ecosystems and biodiversity and enhances resilience to climate change impacts, including by sequestering huge quantities of carbon from the atmosphere and bringing carbon into the soil,

Recalling that, in its decision 3/COP.14,[2] the Conference of the Parties to the Convention invited parties that have committed to voluntary land degradation neutrality targets to implement measures to accelerate the achievement thereof, by, inter alia, creating an enabling environment for the achievement of land degradation neutrality, including the responsible governance of land and tenure security, the engagement of stakeholders and the improved access of smallholders to advisory and financial services, therefore, taking note with appreciation of the pledge made by 129 countries to establish national voluntary targets and relevant measures to achieve land degradation neutrality by 2030, while 107 parties have successfully completed this voluntary process and 100 have already published their national reports on the website of the Convention,

Noting that combating desertification, land degradation and drought, including through the sustainable management of natural resources, can contribute to sustainable development for all and to easing displacement flows,

Bearing in mind its resolution 73/284 of 1 March 2019, in which it declared the decade 2021–2030 as the United Nations Decade on Ecosystem Restoration,

Recalling the adoption of the 2018–2030 Strategic Framework of the Convention,[3] including a new strategic objective on drought,

Reaffirming the Paris Agreement[4] and its early entry into force, encouraging all its parties to fully implement the Agreement, and parties to the United Nations Framework Convention on Climate Change[5] that have not yet done so to deposit their instruments of ratification, acceptance, approval or accession, where appropriate, as soon as possible,

Recognizing that climate change, unsustainable agricultural and forestry practices and land degradation, inter alia, are major and growing drivers of biodiversity loss and ecosystem degradation, and that conservation, restoration and the sustainable use of biodiversity, and ecosystem functions and services, sustainable land management, ecosystem-based approaches and nature-based solutions contribute

[2] See ICCD/COP(14)/23/Add.1.

[3] ICCD/COP(13)/21/Add.1, decision 7/COP.13, annex, and ICCD/COP(15)/23/Add.1, decision 7/COP.15.

[4] Adopted under the UNFCCC in FCCC/CP/2015/10/Add.1, decision 1/CP.21.

[5] United Nations, *Treaty Series*, vol. 1771, No. 30822.

significantly to land degradation neutrality, climate change adaptation and mitigation, disaster risk reduction and food security and nutrition,

Noting with concern the findings of the second edition of *Global Land Outlook* and the findings of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services land degradation and restoration assessment and its *Global Assessment Report on Biodiversity and Ecosystem Services*, the findings of the Intergovernmental Panel on Climate Change contained in its special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems, as well as the findings contained in the special report of the Panel entitled *Global Warming of 1.5°C*,

Recognizing the interdependencies between biodiversity loss, pollution, climate change, desertification and land degradation and their interlinkages with human well-being, including health,

Deeply concerned about the continuous trend in land degradation and the fact that the impacts of desertification, land degradation and drought are felt most strongly by people in vulnerable situations,

Noting with great concern the severe negative impact on human health, safety and well-being caused by the coronavirus disease (COVID-19) pandemic, as well as the severe disruption to societies and economies and the devastating impact on lives and livelihoods, and that the poorest and most vulnerable are the hardest hit by the pandemic, reaffirming the ambition to get back on track to achieve the Sustainable Development Goals by designing and implementing sustainable and inclusive recovery strategies to accelerate progress towards the full implementation of the 2030 Agenda for Sustainable Development and to help to reduce the risk of and build resilience to future shocks, crises and pandemics, including by strengthening health systems and achieving universal health coverage, and recognizing that equitable and timely access for all to safe, quality, effective and affordable COVID-19 vaccines, therapeutics and diagnostics are an essential part of a global response based on unity, solidarity, renewed multilateral cooperation and the principle of leaving no one behind,

Recognizing that combating desertification, land degradation and drought is important for sustainable, inclusive and climate-resilient recovery from the COVID-19 crisis, that it is important to integrate land conservation, protection and restoration, sustainable land management, degraded soil and terrestrial ecosystems restoration, combating desertification and the aim of land degradation neutrality into the global agenda for sustainable development, and that careful targeting of the COVID-19 recovery investments, including land restoration, creates economic opportunities that contribute to environmental sustainability and poverty eradication,

Recalling the United Nations strategic plan for forests 2017–2030,[6] and acknowledging that all types of forests provide essential ecosystem services, such as timber, food, fuel, fodder, non-wood products and shelter, as well as soil and water conservation and clean air, that the sustainable management of forests and trees outside forests is vital to the integrated implementation of the 2030 Agenda and that forests prevent land degradation and desertification and reduce the risk of floods, soil erosion, landslides and avalanches, droughts, sand and dust storms and other disasters,

Reiterating its appreciation to the Government of Côte d'Ivoire for hosting the fifteenth session of the Conference of the Parties to the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or

[6] See resolution 71/285.

Desertification, Particularly in Africa, held in Abidjan from 9 to 20 May 2022, and welcoming the offer made by the Government of Saudi Arabia and the Government of Mongolia to host the sixteenth and seventeenth sessions of the Conference of the Parties, in 2024 and 2026, respectively,

Recalling the establishment of a new intergovernmental working group on drought during the triennium 2022–2024, with a view to presenting its findings and recommendations to the parties for their consideration at the sixteenth session of the Conference of the Parties to the Convention,

Reaffirming the importance of government leadership, multi-stakeholder partnerships and increasing private engagement for the sustainable management, restoration and rehabilitation of ecosystems, biodiversity and land,

Highlighting the importance of multi-stakeholder participation at the local, subnational, national and regional levels and from all sectors of society, including civil society organizations, local government and the private sector, as appropriate, in the implementation of the Convention and its 2018–2030 Strategic Framework,

Recognizing the value of knowledge, education, science and new technology to sustainable land management, including making use of, inter alia, the Voluntary Guidelines for Sustainable Soil Management of the Food and Agriculture Organization of the United Nations, emphasizing the importance of science-based decision-making and that science and technology to combat desertification, land degradation and drought should therefore be further promoted, and acknowledging the work of the Science-Policy Interface of the Convention,

1. *Takes note* of the report of the Secretary-General on the implementation of resolution 76/206 on the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa;[7]

2. *Welcomes* the decisions of the fifteenth session of the Conference of the Parties to the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, and stresses the importance of their effective implementation;

3. *Urges* the implementation of the Paris Agreement and the agreed intergovernmentally negotiated outcomes and decisions of the subsequent United Nations climate change conferences;

4. *Takes note* of the Abidjan Call, which urged giving the highest priority to the issue of drought prevention, resilience, impact mitigation and accelerating the implementation of existing national commitments, towards achieving land degradation neutrality by 2030 and raising ambition for investments in large-scale land restoration projects and programmes, which also help countries and communities to prepare for and mitigate the impacts of drought;

5. *Invites* Member States to support efforts to implement the strategic objectives of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa;

6. *Welcomes* the voluntary commitment of the parties to the Convention to accelerate the restoration of 1 billion hectares of degraded land by 2030 by improving data gathering and monitoring to track progress against the achievement of land

[7] A/77/215, sect. II.

restoration commitments and establishing a new partnership model for large-scale integrated landscape investment programmes;

7. *Strongly encourages* the parties to the Convention to apply and align with the 2018–2030 Strategic Framework of the Convention in their national policies, programmes, plans and processes relating to desertification, land degradation and drought, and to implement the Strategic Framework, taking into account the Addis Ababa Action Agenda of the Third International Conference on Financing for Development;[8]

8. *Welcomes* the establishment of an intergovernmental working group to oversee the midterm evaluation process related to the 2018–2030 Strategic Framework of the Convention, which is to present its findings and recommendations to the parties for their consideration at the sixteenth session of the Conference of the Parties;

9. *Reaffirms* that reducing land degradation and achieving land degradation neutrality has the potential to act as an accelerator and integrator for achieving the Sustainable Development Goals and as a catalyst for attracting sustainable development financing and climate finance to implement the Convention, and respond to the overall objectives of the 2030 Agenda for Sustainable Development;[9]

10. *Reiterates* the need to combat desertification, reduce land degradation, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world, recalls with appreciation the voluntary land degradation neutrality target-setting programme consistent with the Convention and the work of the secretariat of the Convention and partners to assist parties to the Convention in carrying out voluntary target-setting activities, and in this respect reiterates its invitation to parties to the Convention that have not yet subscribed to the programme to do so;

11. *Recognizes* that sustainable land management, ecosystem-based approaches or nature-based solutions constitute promising options to evaluate and consider in connection with sequestering carbon and enhancing the resilience of people and ecosystems affected by desertification, land degradation and drought, as well as the adverse effects of climate change;

12. *Also recognizes* the importance of applying new and innovative technologies and enabling policies and approaches, as well as sharing best practices, in combating desertification, land degradation and drought, and requests the Secretary-General to continue to identify, as appropriate, those technologies, enabling policies and best practices in his report on the implementation of the present resolution;

13. *Affirms* that combating desertification, land degradation and drought and achieving land degradation neutrality through, inter alia, land conservation, protection and restoration, sustainable land management, degraded soil and terrestrial ecosystems restoration, sustainable afforestation and reforestation, which have emerged as a pathway to accelerating progress towards achieving the Sustainable Development Goals, will also contribute, among others, to safeguarding livelihoods, preventing and preparing for future pandemics and achieving a sustainable, inclusive and resilient recovery in the aftermath of the COVID-19 pandemic, and underlines the importance of integrating land conservation, protection and restoration, sustainable land management and degraded soil and terrestrial ecosystems restoration into post-COVID-19 recovery efforts, with particular emphasis on improving the livelihoods of the poorest, including rural communities, and people in vulnerable situations;

[8] Resolution 69/313, annex.

[9] Resolution 70/1.

14. *Encourages* the entities of the United Nations system, when designing and implementing their programmes and projects, to take into account the role of land degradation neutrality as a potential accelerator to achieve the Sustainable Development Goals;

15. *Underlines* the importance of comprehensive reporting, follow-up and review at the global, national and regional levels, as appropriate, in order to track progress in the implementation of the Convention;

16. *Reiterates* the invitation to parties to the Convention to take measures to ensure, as appropriate, that their relevant institutions integrate drought risk management, sustainable livestock and agricultural policies, drought forecasting work, sustainable water management and climate information and climate change impact assessments into relevant policymaking processes and initiatives;

17. *Reiterates its invitation* to the parties to the Convention to provide the Executive Secretary of the Convention with full support in the fulfilment of his mandate and in promoting the implementation of the Convention;

18. *Stresses* the urgent need to enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change and extreme weather events, and in this regard urges Member States to continue to engage in adaptation planning processes and to enhance cooperation in disaster risk reduction;

19. *Invites* the United Nations Coalition on Combating Sand and Dust Storms, which was formed at the twenty-fourth meeting of the senior officials of the Environment Management Group, in September 2018, and other relevant United Nations entities to continue their collaboration to assist affected country parties in developing and implementing national and regional policies on sand and dust storms;

20. *Recognizes* that gender equality and the empowerment of women and girls remain a crucial contribution to the effective implementation of the Convention, including its 2018–2030 Strategic Framework, and to the achievement of the Goals of the 2030 Agenda, stresses the importance of parties to the Convention and partners pursuing the equal participation of women and men in planning, decision-making and implementation at all levels and further achieving gender equality and the empowerment of all women and girls, as well as women's full, equal, effective and meaningful participation in desertification, land degradation and drought-related policies and activities, and also stresses the importance of the effective implementation of the four priority thematic areas of the Gender Action Plan adopted by the parties to the Convention;

21. *Reiterates* the invitation to the secretariat and the Global Mechanism of the Convention to continue to collaborate and build partnerships with the secretariats of the other Rio conventions, the United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women), other United Nations entities, international organizations and other relevant organizations to explore further ways of strengthening awareness-raising, improving the Gender Action Plan and developing further tools and guidelines for the use of parties in the thematic areas of the Gender Action Plan and the gender-responsive implementation of the Convention;

22. *Recalls* the invitation to parties to the Convention to legally recognize rights to equal use and ownership of land for women and the enhancement of women's equal access to land and land tenure security, as well as the promotion of gender-sensitive measures to combat desertification, land degradation and drought and achieve land degradation neutrality, taking into account the national context, and in this context notes the Abidjan Declaration on Achieving Gender Equality for Successful Land Restoration, which promotes all measures necessary to identify and

eliminate all forms of discrimination against women, with particular attention to the rights of older women, widows, women with disabilities and young women;

23. *Encourages* parties to the Convention to follow the principles of implementation of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security[10] in the implementation of activities to combat desertification, land degradation and drought;

24. *Encourages* the public and private sectors to continue to invest in developing, adapting and scaling up the application of technologies, enabling policies, methods and tools to combat desertification, land degradation and drought in different regions, and to boost knowledge exchange, including of traditional knowledge with the consent of the knowledge holders, capacity-building and sharing of technologies on mutually agreed terms;

25. *Encourages* parties to the Convention to continue to promote the prevention of desertification, land degradation and drought with an integrated landscape approach by sustainably managing land, avoiding practices that degrade land and rehabilitating and restoring already degraded land;

26. *Encourages* developed countries party to the Convention and other relevant stakeholders to actively support the efforts of developing countries party to the Convention in promoting sustainable land management practices and in seeking to achieve a land degradation-neutral world by providing substantial financial resources from all sources facilitated access to appropriate technology on mutually agreed terms and other forms of support, including through capacity-building measures;

27. *Recognizes* the benefits gained from cooperation through the sharing of climate and weather information, forecasting and early warning systems related to desertification, land degradation and drought, while also taking account of sand and dust storms, at the global, regional and subregional levels, and in this regard likewise recognizes the need for further cooperation between parties to the Convention and relevant organizations in the sharing of related information, forecasting and early warning systems;

28. *Encourages* all relevant entities of the United Nations system, within their respective mandates, to harness opportunities for leveraging synergies among the Convention on Biological Diversity,[11] the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, and the United Nations Framework Convention on Climate Change and other relevant multilateral environmental agreements, as well as the 2030 Agenda, and in this respect welcomes the ongoing efforts to strengthen synergies among the secretariats of the aforementioned conventions;

29. *Welcomes* the convening and takes note of the outcome of the High-level Dialogue on Desertification, Land Degradation and Drought convened by the President of the General Assembly at its seventy-fifth session, which mapped the way forward in view of the end of the United Nations Decade for Deserts and the Fight against Desertification and the beginning of the United Nations Decade on Ecosystem Restoration, as well as the convening of the 2021 United Nations Food Systems Summit, underlines the importance of combating desertification and water scarcity and restoring degraded lands to ensure sustainable food production during the COVID-19 recovery period and recognizes the critical role that healthy land has in the global economy, calls for measures to explore and promote consumption and

[10] Food and Agriculture Organization of the United Nations, document CL 144/9 (C 2013/20), appendix D.

[11] United Nations, *Treaty Series*, vol. 1760, No. 30619.

production patterns that conserve and protect land, advance land degradation neutrality and promote the conservation, protection, sustainable management and restoration of forests, taking note, inter alia, of the Glasgow Leaders' Declaration on Forests and Land Use, and welcomes the convening of the twenty-seventh session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, held in Sharm el-Sheikh, Egypt, from 6 to 20 November 2022;

30. *Notes with appreciation* the financial contributions that have been made by Member States and other donors towards the Land Degradation Neutrality Fund, and invites Member States and other donors to make further contributions to the Land Degradation Neutrality Fund and the drought initiative of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa;

31. *Decides* to include, in the United Nations calendar of conferences and meetings for the year 2023 and subsequent years, the sessions of the Conference of the Parties to the Convention and each of its subsidiary bodies, and requests the Secretary-General to continue to make provisions for those sessions in the proposed programme budgets;

32. *Acknowledges* the commitment of the parties to the Convention to boost drought resilience by identifying the expansion of arid, semi-arid, dry sub-humid areas and drylands, improving national policies and early warning systems linked to early action, learning and sharing knowledge, building partnerships and coordinating action, and mobilizing drought finance to support a shift from reactive to proactive drought management, and welcomes the announcement by the Secretary-General of the Early Warnings for All initiative to ensure that every person on Earth is protected by early warning systems within five years;

33. *Takes note* of decision 22/COP.15,[12] which invites the parties to the Convention to promote sustainable territorial development, including multi-level governance and planning mechanisms, as appropriate, to strengthen urban-rural linkages, address desertification/land degradation and drought, including sand and dust storms, and create social and economic opportunities that reduce forced migration and displacement and increase rural resilience and livelihood stability;

34. *Acknowledges* the decision of the Conference of the Parties at its fifteenth session with respect to promoting decent land-based jobs for youth and land-based youth entrepreneurship and strengthening youth participation in the processes relating to the Convention;

35. *Reaffirms* the continuation, for a further five-year period, of the current institutional linkage and related administrative arrangements with the United Nations Secretariat, to be reviewed by both the General Assembly and the Conference of the Parties no later than 31 December 2026;

36. *Requests* the Secretary-General to submit to the General Assembly at its seventy-eighth session a report on the implementation of the present resolution, and decides to include in the provisional agenda of its seventy-eighth session, under the item entitled "Sustainable development", the sub-item entitled "Implementation of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa".

53rd plenary meeting
14 December 2022

[12] See ICCD/COP(15)/23/Add.1.

United Nations A/RES/77/167

General Assembly

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28 December 2022

Seventy-seventh session
Agenda item 18 (f)
Sustainable development: Convention on Biological Diversity

Resolution adopted by the General Assembly on 14 December 2022

[*on the report of the Second Committee (A/77/443/Add.6, para. 10)*]

77/167. Implementation of the Convention on Biological Diversity and its contribution to sustainable development

The General Assembly,

Recalling its resolution 76/207 of 17 December 2021 and its previous resolutions relating to the Convention on Biological Diversity,[1]

Reaffirming the outcomes of the United Nations Conference on Environment and Development, including the Rio Declaration on Environment and Development[2] and its principles, the outcome document of the United Nations Conference on Sustainable Development, entitled "The future we want",[3] and, inter alia, the commitments concerning biodiversity contained therein, the Programme for the Further Implementation of Agenda 21,[4] the Johannesburg Declaration on Sustainable Development[5] and the Plan of Implementation of the World Summit on Sustainable Development (Johannesburg Plan of Implementation)[6] and the outcome document of the special event to follow up efforts made towards achieving the Millennium Development Goals convened by the President of the General Assembly,[7]

Reaffirming also its resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development", in which

[1] United Nations, *Treaty Series*, vol. 1760, No. 30619.
[2] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3–14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex I.
[3] Resolution 66/288, annex.
[4] Resolution S-19/2, annex.
[5] *Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August–4 September 2002* (United Nations publication, Sales No. E.03.II.A.1 and corrigendum), chap. I, resolution 1, annex.
[6] Ibid., resolution 2, annex.
[7] Resolution 68/6.

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it adopted a comprehensive, far-reaching and people-centred set of universal and transformative Sustainable Development Goals and targets, its commitment to working tirelessly for the full implementation of the Agenda by 2030, its recognition that eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development, its commitment to achieving sustainable development in its three dimensions – economic, social and environmental – in a balanced and integrated manner, and to building upon the achievements of the Millennium Development Goals and seeking to address their unfinished business,

Reaffirming further its resolution 69/313 of 27 July 2015 on the Addis Ababa Action Agenda of the Third International Conference on Financing for Development, which is an integral part of the 2030 Agenda for Sustainable Development, supports and complements it, helps to contextualize its means of implementation targets with concrete policies and actions, and reaffirms the strong political commitment to address the challenge of financing and creating an enabling environment at all levels for sustainable development in the spirit of global partnership and solidarity,

Reaffirming the Paris Agreement,[8] and encouraging all its parties to fully implement the Agreement, and parties to the United Nations Framework Convention on Climate Change[9] that have not yet done so to deposit their instruments of ratification, acceptance, approval or accession, where appropriate, as soon as possible,

Reaffirming also the New Urban Agenda, adopted at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III), held in Quito, Ecuador, from 17 to 20 October 2016,[10] and its vision for cities and human settlements that protect, conserve, restore and promote their ecosystems, water, natural habitats and biodiversity and minimize their environmental impact,

Recalling the Climate Action Summit convened by the Secretary-General on 23 September 2019, recalling also the multi-partner initiatives and commitments presented during the Summit, and welcoming the convening of the twenty-seventh session of the Conference of the Parties to the United Nations Framework Convention on Climate Change in Sharm el-Sheikh, Egypt, from 6 to 20 November 2022,

Urging the implementation of the Paris Agreement and the agreed intergovernmentally negotiated outcomes and decisions of the subsequent United Nations Climate Change Conferences,

Recalling the convening of the summit on biodiversity on 30 September 2020, at the level of Heads of State and Government, in order to highlight the urgency of action at the highest levels in support of an ambitious, balanced, practical, effective, robust and transformative post-2020 global biodiversity framework that contributes to the 2030 Agenda and places the global community on a path towards realizing the 2050 Vision for Biodiversity, “Living in harmony with nature”,

Taking note with appreciation of the interactive dialogue on Harmony with Nature convened by the President of the General Assembly under the overall theme “Harmony with nature and biodiversity: contributions of ecological economics and Earth-centered law” on the implementation of education and biodiversity conservation in harmony with nature, held on 22 April 2022, in commemoration of International Mother Earth Day,

[8] Adopted under the UNFCCC in FCCC/CP/2015/10/Add.1, decision 1/CP.21.
[9] United Nations, *Treaty Series*, vol. 1771, No. 30822.
[10] Resolution 71/256, annex.

Recalling its resolution 76/300 of 28 July 2022 on the human right to a clean, healthy and sustainable environment,

Recalling also its resolutions 71/312 of 6 July 2017 and 76/296 of 21 July 2022, in which it endorsed the declarations adopted by the first and second United Nations Conferences to Support the Implementation of Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development, held in New York from 5 to 9 June 2017 and in Lisbon from 27 June to 1 July 2022, respectively, and in this regard reaffirming the important role of the declarations in demonstrating the collective will to take action to conserve and sustainably use our oceans, seas and marine resources for sustainable development, as well as to halt and reverse the decline in the health and productivity of our ocean and its ecosystems and to protect and restore its resilience and ecological integrity, and recognizing the important contributions of the dialogues and voluntary commitments made in the context of those Conferences to the effective and timely implementation of Sustainable Development Goal 14,

Taking note of the voluntary commitments by more than 100 Member States to conserve or protect at least 30 per cent of the world's land by 2030 and at least 30 per cent of the global ocean within marine protected areas and other effective area-based conservation measures by 2030, which can further contribute to the protection of biodiversity,

Recalling its resolution 65/161 of 20 December 2010, in which it declared 2011–2020 the United Nations Decade on Biodiversity, and recalling its resolution 73/284 of 1 March 2019, in which it proclaimed 2021–2030 the United Nations Decade on Ecosystem Restoration, with the aim of supporting and scaling up efforts to prevent, halt and reverse the degradation of ecosystems worldwide and raise awareness of the importance of successful ecosystem restoration,

Recalling the United Nations strategic plan for forests 2017–2030,[11] and recognizing that forests are home to an estimated 80 per cent of all terrestrial species and that forests, including boreal, temperate and tropical, contribute substantially to climate change mitigation and adaptation and to the conservation of biodiversity,

Recalling also the fifth edition of the *Global Biodiversity Outlook*, which highlighted that none of the 20 Aichi Biodiversity Targets were fully achieved, although six were partially achieved (targets 9, 11, 16, 17, 19 and 20),

Noting with concern that the Sustainable Development Goal targets with a 2020 deadline have not been fully achieved,

Recognizing that the coronavirus disease (COVID-19) pandemic and other pandemics underscore the need to conserve, restore and sustainably use biodiversity, on land and below water, to reduce the risk of the economic, social and environmental impacts of disasters and future pandemic outbreaks, many of which are exacerbated by biodiversity loss, the increased scale of poaching and the illegal use of and trade in wildlife and wildlife products, desertification, land degradation and drought, climate change and plastic pollution, including in the marine environment, and emphasizing the need to support and invest at all levels, to enhance efforts to build resilience, to reduce the likelihood of zoonotic infections and to avoid or minimize adverse impacts on biological diversity in order to achieve the objectives of the Convention on Biological Diversity and to achieve a sustainable, resilient and inclusive recovery,

[11] See resolution 71/285.

Recalling that the objectives of the Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources, by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding,

Recognizing that the achievement of the three objectives of the Convention is crucial for sustainable development, poverty eradication, food security and the improvement of human health and well-being and a major factor underpinning the achievement of the Sustainable Development Goals and other internationally agreed development goals,

Reaffirming that, in accordance with the Charter of the United Nations and the principles of international law, States have the sovereign right to exploit their own resources pursuant to their own environmental policies and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction,

Reaffirming also the intrinsic value of biological diversity, as well as the ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic values of biological diversity, and its critical role in maintaining ecosystems that provide essential services, which are critical foundations for sustainable development and human health and well-being,

Encouraging parties, other Governments and relevant organizations to integrate nature-based solutions, ecosystem-based approaches and other management and conservation approaches, in line with resolution 5/5 of 7 March 2022 of the United Nations Environment Assembly,[12] to climate change adaptation and mitigation and disaster risk reduction into their strategic planning, as appropriate, across sectors,

Recognizing that the traditional knowledge, innovations and practices of Indigenous Peoples and local communities that are relevant to the Convention make a key contribution to the conservation and sustainable use of biodiversity and that their wider application can support social well-being and sustainable livelihoods,

Recalling the decisions adopted by the Conference of the Parties to the Convention on Biological Diversity at its thirteenth and fourteenth meetings, on article 8 (j) and related provisions,[13] decision CBD/CP/MOP/VIII/19[14] and decision CBD/NP/MOP/DEC/2/7,[15] as well as of the work done by the Ad Hoc Open-ended Inter-sessional Working Group on Article 8 (j) and related provisions,

[12] UNEP/EA.5/Res.5.

[13] United Nations Environment Programme, document UNEP/CBD/COP/13/25, decisions XIII/18 and 14/12, 14/13, 14/14, 14/15, 14/16 and 14/17 of the Conference of the Parties to the Convention on Biological Diversity.

[14] Adopted by the Conference of the Parties serving as the Meeting of the Parties to the Cartagena Protocol on Biosafety at its eighth meeting (see United Nations Environment Programme, document UNEP/CBD/CP/MOP/8/17).

[15] Adopted by the Conference of the Parties serving as the Meeting of the Parties to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization at its second meeting (see United Nations Environment Programme, document UNEP/CBD/NP/MOP/2/13).

Recalling also the United Nations Declaration on the Rights of Indigenous Peoples[16] and the outcome document of the high-level plenary meeting of the General Assembly known as the World Conference on Indigenous Peoples,[17]

Recognizing the vital role that women play in the conservation and sustainable use of biological diversity, reaffirming the need for their full, equal, effective and meaningful participation at all levels of policymaking and implementation for the conservation and sustainable use of biological diversity, as well as ecosystem restoration, recognizing the contribution of the 2015–2020 Gender Plan of Action under the Convention on Biological Diversity[18] to the integration of a gender perspective and to promoting gender equality in the implementation of the Convention, and looking forward to the post-2020 Gender Plan of Action, to be adopted at the fifteenth meeting of the Conference of the Parties to the Convention,

Recognizing also the important role of other biodiversity-related multilateral environmental agreements, regional agreements and initiatives in contributing to the conservation and sustainable use of biodiversity, including the fourteenth meeting of the Conference of the Contracting Parties to the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention on Wetlands), held in Wuhan, China, and Geneva from 5 to 13 November 2022, the sixty-seventh meeting of the International Whaling Commission, held in Florianópolis, Brazil, from 10 to 14 September 2018, the sixty-eighth meeting of the International Whaling Commission, held from 13 to 21 October 2022 in Portorož, Slovenia, the eighteenth meeting of the Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora, held in Geneva from 17 to 28 August 2019, the thirteenth meeting of the Conference of the Parties to the Convention on the Conservation of Migratory Species of Wild Animals, held in Gandhinagar, India, from 15 to 22 February 2020, the forty-fourth session of the World Heritage Committee, held in Fuzhou, China, from 16 to 31 July 2021, the fifteenth session of the Commission on Phytosanitary Measures in relation to the International Plant Protection Convention, held virtually in March and April 2021, the ninth session of the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture, held in New Delhi from 19 to 24 September 2022, and the nineteenth meeting of the Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora, held in Panama City from 14 to 25 November 2022, and noting regional agreements and initiatives, such as the Revised African Convention on the Conservation of Nature and Natural Resources, the Great Green Wall initiative in Africa, the Adaptation of African Agriculture initiative, the first Middle East Green Initiative summit, held in Riyadh on 25 October 2021, the first meeting of the Conference of the Parties to the Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement), held in Santiago from 20 to 22 April 2022, the tenth session of the Conference of Parties to the Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean Region, held on 23 and 24 November 2021, and the Glasgow Leaders' Declaration on Forests and Land Use, signed on 2 November 2021,

Recognizing further the important role of the Convention on International Trade in Endangered Species of Wild Fauna and Flora in contributing to the conservation and sustainable use of biodiversity and in ensuring that no species entering into

[16] Resolution 61/295, annex.

[17] Resolution 69/2.

[18] United Nations Environment Programme, document UNEP/CBD/COP/12/29, sect. I, decision XII/7, annex.

international trade is threatened with extinction, recognizing also the economic, social and environmental impacts of poaching and trafficking in wildlife,

Recognizing the importance of the outcomes of the resumed fifth session of the United Nations Environment Assembly, held in Nairobi from 28 February to 2 March 2022, and the first special session of the United Nations Environment Assembly to commemorate the fiftieth anniversary of the establishment of the United Nations Environment Programme, held in Nairobi on 3 and 4 March 2022, and recognizing also the importance of the international meeting entitled "Stockholm+50: a healthy planet for the prosperity of all – our responsibility, our opportunity", held in Stockholm on 2 and 3 June 2022, at which the global interconnectedness of the environment was emphasized,

Welcoming the decision by the United Nations Environment Assembly at its resumed fifth session, in resolution 5/14 of 2 March 2022, [19] to convene an intergovernmental negotiating committee to develop an international legally binding instrument on plastic pollution, including in the marine environment, and welcoming also the decision taken by the Environment Assembly at its resumed fifth session to strengthen global action on the sound management of chemicals and waste and to prevent pollution, in line with Environment Assembly resolutions 5/7 and 5/8 of 2 March 2022,[20]

Noting the adoption by the Conference of the Parties to the Convention on Biological Diversity, at its tenth meeting, of the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity,[21] the objective of which is the fair and equitable sharing of the benefits arising from the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding, and acknowledging the role of access to genetic resources and equitable benefit-sharing arising from their utilization in contributing to the conservation and sustainable use of biological diversity, poverty eradication and environmental sustainability, and thereby to the achievement of sustainable development,

Noting also that 195 States and 1 regional economic integration organization are parties to the Convention and that 131 States and 1 regional economic integration organization are parties to the Nagoya Protocol, noting further that 172 States and 1 regional economic integration organization are parties to the Cartagena Protocol on Biosafety to the Convention on Biological Diversity [22] and that 48 States and 1 regional economic integration organization are parties to the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety, [23] and recalling the entry into force of the Nagoya-Kuala Lumpur Supplementary Protocol on 5 March 2018,

Recalling the adoption by the Conference of the Parties to the Convention at its ninth meeting of the strategy for resource mobilization in support of the achievement of the three objectives of the Convention,[24] as well as decision X/3, adopted by the Conference of the Parties at its tenth meeting,[25] on the review of its

[19] UNEP/EA.5/Res.14.
[20] UNEP/EA.5/Res.7 and UNEP/EA.5/Res.8.
[21] United Nations Environment Programme, document UNEP/CBD/COP/10/27, annex, decision X/1.
[22] United Nations, *Treaty Series*, vol. 2226, No. 30619.
[23] See United Nations Environment Programme, document UNEP/CBD/BS/COP-MOP/5/17, annex, decision BS-V/11.
[24] United Nations Environment Programme, document UNEP/CBD/COP/9/29, annex I, decision IX/11.
[25] See United Nations Environment Programme, document UNEP/CBD/COP/10/27, annex.

implementation, and the targets for resource mobilization, under Aichi Target 20 of the Strategic Plan for Biodiversity 2011–2020, adopted by the Conference of the Parties in its decision XII/3,[26]

Recalling with appreciation the Cancun Declaration on Mainstreaming the Conservation and Sustainable Use of Biodiversity for Well-being, adopted at the high-level segment of the thirteenth meeting of the Conference of the Parties to the Convention,[27] and the outcomes of the thirteenth meeting of the Conference of the Parties to the Convention and the meetings of the Conference of the Parties serving as the Meetings of the Parties to the Protocols to the Convention,

Taking note with appreciation of the Sharm el-Sheikh Declaration, adopted at the high-level segment of the fourteenth meeting of the Conference of the Parties to the Convention, and the outcomes of the fourteenth meeting, and the meetings of the Conference of the Parties serving as the Meetings of the Parties to the Protocols to the Convention, held in Sharm el-Sheikh from 17 to 29 November 2018, organized under the theme "Investing in biodiversity for people and planet", as well as the initiative to promote a coherent approach between the United Nations Framework Convention on Climate Change, the Convention on Biological Diversity and the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa[28] (the Rio conventions) to address biodiversity loss, climate change and land and ecosystem degradation, and recalling the hosting by Egypt of the African Biodiversity Summit, on 13 November 2018, and the adoption of the African Ministerial Declaration on Biodiversity and the Pan African Action Agenda on Ecosystem Restoration for Increased Resilience,

Noting with concern the findings from the contribution of Working Group I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, in which the Intergovernmental Panel highlights the linkages between climate change and extreme weather events and slow-onset events and their negative impacts on people and nature, and highlighting the increasing frequency and intensity of extreme weather events, such as heatwaves, droughts and heavy precipitation,

Welcoming the pre-conference of the parties organized by Colombia on 30 August 2021 to discuss priorities and expectations and raise political commitment for a post-2020 global biodiversity framework to be adopted at the fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity,

Recognizing the need for concerted enhanced action, through planning, reporting, monitoring and review, and transformative change to adopt a post-2020 global biodiversity framework that contributes to the 2030 Agenda for Sustainable Development and places the global community on a path towards realizing the 2050 Vision for Biodiversity of living in harmony with nature, and stressing that predictable, sufficient and appropriate means of implementation and resources from a variety of sources will be key for the success of the post-2020 global biodiversity framework and the achievement of the Sustainable Development Goals,

Reiterating the pledge that no one will be left behind, reaffirming the recognition that the dignity of the human person is fundamental, and the wish to see the Goals and targets met for all nations and peoples and for all segments of society, and recommitting to endeavour to reach the furthest behind first,

[26] See United Nations Environment Programme, document UNEP/CBD/COP/12/29, sect. I.
[27] United Nations Environment Programme, document UNEP/CBD/COP/13/24.
[28] United Nations, *Treaty Series*, vol. 1954, No. 33480.

1. *Takes note* of the report of the Executive Secretary of the Convention on Biological Diversity;[29]

2. *Welcomes* the convening of the first part of the fifteenth meeting of the Conference of the Parties to the Convention, as well as the Meetings of the Parties to the Protocols to the Convention, held in Kunming, China, from 11 to 15 October 2021, all under the theme proposed by the host, "Ecological civilization: building a shared future for all life on Earth", takes note of the Kunming Declaration of its high-level segment, looks forward to the second part of the fifteenth meeting of the Conference of the Parties to the Convention, as well as the Meetings of the Parties to the Protocols to the Convention, which will reconvene under the presidency of China in Montreal, Canada, from 7 to 19 December 2022, and recognizes that a post-2020 global biodiversity framework to be adopted is intended to contribute to the 2030 Agenda for Sustainable Development[30] and is expected to place the global community on a path towards realizing the 2050 Vision for Biodiversity;

3. *Calls upon* all parties to the Convention, United Nations entities and all other stakeholders to continue to effectively engage in the negotiations on an ambitious, balanced, practical, effective, robust and transformative post-2020 global biodiversity framework and to ensure its early, inclusive and effective implementation once it is adopted, and highlights, in this regard, that the provision of adequate and sufficient, predictable, timely and easily accessible means of implementation, particularly to developing countries, in line with the provisions of the Convention, including financial, capacity-building and development, knowledge management, technical and scientific cooperation and technology transfer resources, will be key for the success of the post-2020 global biodiversity framework;

4. *Calls for* the provision and mobilization of new and additional means of implementation from all sources to support the full implementation of the Convention on Biological Diversity and, in particular, the post-2020 global biodiversity framework, for adoption at the second part of the fifteenth meeting of the Conference of the Parties to the Convention, including by increasing the financial resources to support countries that are parties to the Convention, particularly developing countries;

5. *Urges* parties to the Convention to ensure the coherence and complementarity of a post-2020 global biodiversity framework with other existing or upcoming international processes, in particular with regard to the 2030 Agenda, the Paris Agreement and other related processes, frameworks and strategies, and reiterates the invitation to the other multilateral environmental agreements, including biodiversity-related conventions and the Rio conventions, relevant international organizations and their programmes, and other relevant processes to actively participate in the development process for a post-2020 global biodiversity framework;

6. *Looks forward* to the sixteenth meeting of the Conference of the Parties and the meetings of the Conference of the Parties serving as the Meetings of the Parties to the Protocols to the Convention, to be held in Türkiye;

7. *Encourages* support for the Sharm el-Sheikh to Kunming Action Agenda for Nature and People, which is aimed at collecting, coordinating and celebrating actions in support of biodiversity conservation and its sustainable use, encourages all relevant stakeholders, including Indigenous Peoples and local communities and the private sector, to consider developing biodiversity commitments, and invites relevant agencies, funds and programmes of the United

[29] A/77/215, sect. III.

[30] Resolution 70/1.

Nations system and other relevant institutions and intergovernmental organizations, where relevant, to support the implementation of the Action Agenda;

8. *Urges* parties to the Convention on Biological Diversity and all other relevant stakeholders to mainstream biodiversity into COVID-19 response and recovery efforts, to fully implement and support the 2030 Agenda for Sustainable Development and other international development goals, including by strengthening approaches to enhance resilience, protecting wild flora and fauna and other living species, reversing the trends in environmental degradation, through the conservation, sustainable use and restoration of ecosystems, sustainably managing water resources at all levels, preventing the retreat of mountain glaciers and permafrost thaw, sustainably managing all types of forests and halting deforestation and forest degradation, as well as by integrating the conservation and sustainable use of biodiversity and access to genetic resources and the fair and equitable sharing of benefits arising from their utilization into relevant national decision-making, emphasizes that biodiversity and health linkages should be addressed holistically, including through a biodiversity-inclusive One Health approach, among other approaches, recalls in this regard decision 14/4 of 30 November 2018 of the Conference of the Parties to the Convention on Biological Diversity and resolutions 3/4 of 30 January 2018, 5/1 of 2 March 2022 and 5/6 of 7 March 2022 of the United Nations Environment Assembly,[31] and urges parties to adopt a post-2020 global biodiversity framework that contributes to the 2030 Agenda and places the global community on a path towards realizing the 2050 Vision for Biodiversity of living in harmony with nature;

9. *Notes* that the COVID-19 pandemic has exacerbated pre-existing inequalities and challenges for the implementation of the Convention and further highlighted that the loss and degradation of biodiversity increases the risk of zoonotic disease spillover from wildlife to people and that biodiversity should continue to be mainstreamed in COVID-19 recovery plans and in plans aimed at reducing the risk of future pandemics, emphasizes the importance of a One Health approach and other holistic approaches that deliver multiple benefits to the health and well-being of people and planet, that would further strengthen the capacity to address biodiversity loss, prevent and respond to the emergence of diseases, including zoonotic infections, and future pandemics, and contribute to reducing the adverse impacts of climate change, calls for transformative actions from all relevant stakeholders and adequate and sufficient means of implementation, particularly for developing countries, to ensure the full implementation of the Convention to halt and reverse biodiversity loss, and welcomes the financial commitments and initiatives that have been announced from governments, organizations and the private sector that contribute to biodiversity conservation, restoration and sustainable use and keep the political momentum towards the adoption of an ambitious, balanced, practical, effective, robust and transformative post-2020 global biodiversity framework;

10. *Notes with concern* the limited progress made in the implementation of the three objectives of the Convention, namely, the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources;

11. *Recalls with appreciation* the entry into force of the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity on 12 October 2014, and notes with particular concern the limited progress made in the implementation of the Nagoya Protocol;

[31] UNEP/EA.3/Res.4, UNEP/EA.5/Res.1 and UNEP/EA.5/Res.6.

12. *Notes* the limited progress made in mainstreaming article 8 (j) of the Convention and related provisions into various areas of work under the Convention, takes note with appreciation of decision 14/17 of the Conference of the Parties to the Convention to consider the development of a fully integrated programme of work on article 8 (j) and related provisions within a post-2020 global biodiversity framework, to allow for the full and effective participation of Indigenous Peoples and local communities in the work of the Convention, and in this regard invites the secretariat of the Convention, through the Secretary-General, to report on the progress made by the Ad Hoc Open-ended Inter-sessional Working Group on Article 8 (j) and related provisions when reporting on the implementation of the present resolution to the General Assembly;

13. *Highlights* the importance of parties raising high-level political engagement for the achievement of the objectives of the Convention and the related Goals and targets of the 2030 Agenda;

14. *Recalls* the commitments made by the parties at the high-level segment of the fourteenth meeting of the Conference of the Parties and through the decisions adopted, which support the implementation of the current Strategic Plan for Biodiversity 2011–2020 and the development of a post-2020 global biodiversity framework, inter alia, to:

(a) Accelerating efforts to implement the Strategic Plan for Biodiversity 2011–2020 and achieve the Aichi Biodiversity Targets, including by implementing the decisions of the Conference of the Parties and the Cartagena and Nagoya Protocols, as appropriate, and by providing and mobilizing international and national resources, thereby contributing to the implementation of the 2030 Agenda;

(b) Supporting the development and implementation of a post-2020 global biodiversity framework, building on the Aichi Biodiversity Targets and the lessons learned from the implementation of the Strategic Plan for Biodiversity 2011–2020 and aligned with the 2030 Agenda, with a level of ambition and practicality that will facilitate the transformational changes needed to achieve the 2050 Vision for Biodiversity, as noted in the conclusions of the Subsidiary Body on Scientific, Technical and Technological Advice;

(c) Promoting, prior to the fifteenth meeting of the Conference of the Parties, voluntary biodiversity contributions by parties and other actors towards achieving the 2050 Vision for Biodiversity;

(d) Engaging Indigenous Peoples and local communities, women, youth, civil society, local governments and authorities, academia, the business and financial sectors and other relevant stakeholders to support action towards the 2050 Vision for Biodiversity and to provide momentum for the implementation of a post-2020 global biodiversity framework;

15. *Encourages* the respective parties, in close collaboration with relevant stakeholders, to take concrete measures towards achieving the objectives of the Convention on Biological Diversity and the Protocols thereto, the Cartagena Protocol on Biosafety and the Nagoya Protocol, requests the parties, in close collaboration with relevant stakeholders, to coherently and efficiently implement the obligations and commitments under the Convention and the Protocols, and in this regard emphasizes the need to comprehensively address at all levels the difficulties that may impede their implementation;

16. *Reaffirms* the importance of continuing to pursue more efficient and coherent implementation of the three objectives of the Convention, and calls upon parties and stakeholders to strengthen international cooperation measures for the fulfilment of obligations contained in the Convention;

17. *Invites* all parties, relevant departments of the Secretariat, the specialized agencies, funds and programmes of the United Nations system and the regional commissions to continue to contribute to the achievement of the objectives of the Convention;

18. *Notes* the contribution of the United Nations Environment Management Group, chaired by the Executive Director of the United Nations Environment Programme, to the development and implementation of a post-2020 global biodiversity framework, for adoption at the second part of the fifteenth meeting of the Conference of the Parties to the Convention;

19. *Stresses* the importance of mainstreaming biodiversity for achieving the objectives of the Convention, and the 2050 Vision for Biodiversity in order to achieve the transformational change required throughout societies and economies, including changes in behaviour and decision-making at all levels, and urges all relevant stakeholders to mainstream biodiversity in all relevant sectors;

20. *Calls upon* Governments and all stakeholders to take appropriate measures to mainstream consideration of the socioeconomic impacts and benefits of the conservation and sustainable use of biodiversity and its components, as well as ecosystems that provide essential services, into relevant programmes and policies at all levels, in accordance with national legislation, circumstances and priorities;

21. *Stresses* the importance of mainstreaming biodiversity in the implementation of the 2030 Agenda as part of national implementation plans for the Sustainable Development Goals, in particular all biodiversity-related Goals and targets;

22. *Recognizes* the importance of the effective and successful work being undertaken by the intergovernmental conference on an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction and calls upon participating delegations to reach an ambitious agreement without delay, recognizing the potential contribution of its outcomes to the advancement of Sustainable Development Goal 14, emphasizes the importance of ending illegal, unreported and unregulated fishing, and welcomes the Agreement on Fisheries Subsidies reached at the Twelfth Ministerial Conference of the World Trade Organization;

23. *Recognizes also* that integrating biodiversity considerations into sectoral and cross-sectoral policies, plans and programmes at all levels is critical for harnessing the benefits of enhanced synergies and policy coherence;

24. *Notes* the work of the Ad Hoc Technical Expert Group on Biodiversity and Climate Change established under the Convention on Biological Diversity, which highlights that biodiversity contributes to and enhances climate mitigation and adaptation and that continued climate change will have predominantly adverse and often irreversible impacts on many ecosystems and their functions and services, with significant negative social, cultural and economic consequences;

25. *Welcomes* the decisions of the parties to the Convention to better mainstream biodiversity and to take specific actions tailored to national needs and circumstances, and in line with other relevant international agreements, including in key sectors, such as agriculture, forestry, fisheries and tourism, as well as health, energy, mining, infrastructure, manufacturing and processing sectors, which are crucial for addressing biodiversity loss, bearing in mind the impact of these sectors on biodiversity;

26. *Recognizes* that the conservation and sustainable use of biodiversity can significantly contribute to disaster risk reduction and to reducing the adverse impacts of climate change, including by adding resilience to fragile ecosystems and making them less vulnerable;

27. *Urges* the parties to the Convention to facilitate the transfer of technology, on mutually agreed terms, for the effective implementation of the Convention in accordance with article 16 and other relevant provisions of the Convention, in this regard takes note of the strategy for the practical implementation of the programme of work on technology transfer and scientific and technical cooperation developed by the Ad Hoc Technical Expert Group on Technology Transfer and Scientific and Technological Cooperation, as well as of decision XI/2, entitled "Review of progress in implementation of national biodiversity strategies and action plans and related capacity-building support to parties",[32] and recalls the relevant decisions adopted by the Conference of the Parties at its twelfth meeting in this regard;[33]

28. *Requests* the continuation of efforts made by the secretariat of the Convention, parties to the Convention and the Global Environment Facility, as the financial mechanism of the Convention, in conjunction with United Nations funds and programmes and the specialized agencies, as well as other entities, in organizing capacity-building workshops to support countries in the updating of national biodiversity strategies and action plans, with a view to enhancing capacity and addressing the need for human, technical and financial resources to implement the Convention and the post-2020 global biodiversity framework, at the second part of the fifteenth meeting of the Conference of the Parties to the Convention, in particular for developing countries;

29. *Encourages* parties to promote the mainstreaming of gender considerations taking into account the 2015–2020 Gender Plan of Action under the Convention on Biological Diversity, in developing, implementing and revising their national and, where appropriate, regional and subnational biodiversity strategies and action plans and equivalent instruments in implementing the three objectives of the Convention, recognizes the need to enhance cooperation on capacity-building in order to support parties in this process, looks forward to the post-2020 Gender Plan of Action, to be adopted at the fifteenth meeting of the Conference of the Parties to the Convention, and emphasizes the importance of integrating a gender perspective into the process of developing a post-2020 global biodiversity framework;

30. *Recognizes* that parties to the Convention have reiterated that resources, financial, human and technical, need to be provided and mobilized from all sources, with a view to the effective implementation of the Strategic Plan for Biodiversity 2011–2020 and a post-2020 global biodiversity framework to follow it, stresses the need for further consideration of the evaluation of all resources mobilized in terms of the biodiversity outcomes achieved, and in this regard welcomes decision XII/3,[34] adopted by the Conference of the Parties to the Convention on Biological Diversity at its twelfth meeting, on an overall substantial increase in total biodiversity-related funding for the implementation of the Strategic Plan from a variety of sources, including national and international resource mobilization, international cooperation and the exploration of new and innovative financial mechanisms, as appropriate, and notes that the fourteenth meeting of the Conference of the Parties affirmed that resource mobilization will be an integral part of a post-2020 global biodiversity framework and initiated preparations of this resource mobilization component at an

[32] See United Nations Environment Programme, document UNEP/CBD/COP/11/35, annex I.

[33] See United Nations Environment Programme, document UNEP/CBD/COP/12/29, sect. I.

[34] See United Nations Environment Programme, document UNEP/CBD/COP/12/29, sect. I.

early stage and in full coherence and coordination with the overall process of developing a post-2020 framework;

31. *Invites* countries that have not yet done so to ratify or accede to the Convention;

32. *Invites* parties to the Convention to ratify or accede to the Nagoya Protocol, and invites the Executive Secretary of the Convention and the Global Environment Facility, within its mandate as the financial mechanism of the Convention, in collaboration with relevant organizations, to continue to support capacity-building and development activities to support the ratification and implementation of the Protocol;

33. *Also invites* parties to the Convention to consider, as appropriate, ratifying or acceding to the Cartagena Protocol;

34. *Invites* parties to the Cartagena Protocol to consider, as appropriate, ratifying or acceding to the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety;

35. *Notes with profound concern* the findings of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services *Global Assessment Report on Biodiversity and Ecosystem Services*, and stresses the urgent need to halt the global decline of biodiversity, which is unprecedented in human history, including its main indirect and direct drivers, in particular changes in land and sea use, direct exploitation of organisms, climate change, pollution and invasion of alien species;

36. *Notes* the findings of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services in its assessment report on the diverse values and valuation of nature, and stresses that achieving a sustainable and just future requires institutions that enable a recognition and integration of the diverse values of nature and nature's contributions to people, and that the transformative change needed to address the global biodiversity crisis relies on shifting away from predominant values that currently overemphasize short-term and individual material gains to nurturing sustainability-aligned values across society;

37. *Takes note* of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services assessment report on the sustainable use of wild species;

38. *Notes* that increasing investments in nature-based solutions, ecosystem-based approaches and other management and conservation approaches, in line with resolution 5/5 of the United Nations Environment Assembly, has the potential to cost-effectively support biodiversity conservation, restoration and its sustainable use, to help advance climate mitigation and adaptation and to reduce adverse impacts of climate change and to slow, halt and even reverse some aspects of biodiversity and ecosystem loss, and therefore invites all relevant stakeholders to consider the opportunities it presents;

39. *Takes note with concern* of the findings of the Intergovernmental Panel on Climate Change in its special reports entitled *Global Warming of 1.5°C*, *The Ocean and Cryosphere in a Changing Climate* and *Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems*;

40. *Stresses* the importance of the engagement of the private sector and other relevant stakeholders, as well as Indigenous Peoples and local communities, women and youth, in the implementation of the three objectives of the Convention

and in the achievement of the biodiversity targets, invites them to align their practices more explicitly with the objectives of the Convention, including through partnerships, in accordance with national legislation, circumstances and priorities, in this regard stresses the importance of the ongoing work of the Global Partnership for Business and Biodiversity, and notes other related and complementary initiatives;

41. *Notes* the ongoing work of the Joint Liaison Group of the secretariats and offices of the relevant subsidiary bodies of the Convention on Biological Diversity, the Convention to Combat Desertification and the United Nations Framework Convention on Climate Change and the Liaison Group of Biodiversity-related Conventions, acknowledges the importance of improving coherence in the implementation of those conventions, recognizes the importance of enhancing synergies among the biodiversity-related conventions and agreements, without prejudice to their specific objectives, in this regard notes the contribution of the United Nations Environment Assembly, as reflected in its resolution 2/17 of 27 May 2016,[35] and the outcomes of its fourth session, held in Nairobi from 11 to 15 March 2019,[36] in particular its ministerial declaration, and encourages the conferences of the parties to the biodiversity-related multilateral environmental agreements to consider strengthening efforts in this regard, taking into account relevant experiences and bearing in mind their respective independent legal status and mandates;

42. *Reaffirms* the commitment at the very heart of the 2030 Agenda to leave no one behind and commit to taking more tangible steps to support people in vulnerable situations and the most vulnerable countries and to reach the furthest behind first;

43. *Requests* the Secretary-General to submit to the General Assembly, at its seventy-eighth session, a report on the implementation of the present resolution, progress in the implementation of the Convention on Biological Diversity and the post-2020 global biodiversity framework, and decides to include in the provisional agenda of its seventy-eighth session, under the item entitled "Sustainable development", the sub-item entitled "Convention on Biological Diversity".

53rd plenary meeting
14 December 2022

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[35] See *Official Records of the General Assembly, Seventy-first Session, Supplement No. 25* (A/71/25), annex.

[36] Ibid., *Seventy-fourth Session, Supplement No. 25* (A/74/25), annex I.

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General Assembly

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Seventy-eighth session
Items 19 (d), (e) and (f) of the provisional agenda**
Sustainable development:
Protection of global climate for present and future generations of humankind
Implementation of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa
Convention on Biological Diversity

Implementation of United Nations environmental conventions

Note by the Secretary-General

The Secretary-General has the honour to transmit to the General Assembly the reports submitted by the secretariats of the United Nations Framework Convention on Climate Change, the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, and the Convention on Biological Diversity.

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I. Report of the Executive Secretary of the United Nations Framework Convention on Climate Change on the work of the Conference of the Parties to the Convention

A. Introduction

1. The General Assembly, in its resolution 77/165 on the protection of the global climate for present and future generations of humankind, invited the secretariat of the United Nations Framework Convention on Climate Change to report, through the Secretary-General, to the Assembly at its seventy-eighth session, on the work of the Conference of the Parties to the Convention. The present report has been prepared in response to that invitation.

B. Outcomes of the twenty-seventh session of the Conference of the Parties, the seventeenth session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol and the fourth session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement

1. Summary

2. The United Nations Climate Change Conference, presided over by the Government of Egypt, was held in Sharm el-Sheikh from 6 to 20 November 2022 and comprised the following sessions:

(a) Twenty-seventh session of the Conference of the Parties to the Convention;

(b) Seventeenth session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol;

(c) Fourth session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement;

(d) Fifty-seventh session of the Subsidiary Body for Scientific and Technological Advice;

(e) Fifty-seventh session of the Subsidiary Body for Implementation.

3. The Conference was attended by 21,508 government delegates from 195 parties to the Convention, 12,982 observers, including those from 38 United Nations Secretariat units and bodies, 23 specialized agencies and related organizations, 99 intergovernmental organizations and 1,610 non-governmental organizations, as well as 2,160 media representatives.

4. The decisions taken, including the major overarching decisions of the Conference, the Sharm el-Sheikh Implementation Plan, confirmed that, with most rules and modalities agreed, parties are now moving towards full implementation of the Paris Agreement. The Conference showed the resolve of all countries to implement ambitious, just, equitable and inclusive transitions to low-emission and climate-resilient development in line with the principles and objectives of the Convention, its Kyoto Protocol and the Paris Agreement. The importance of keeping the temperature goals of the Paris Agreement, especially the 1.5°C goal, within reach was maintained, underpinned by the finding of the Intergovernmental Panel on Climate Change that limiting warming to around 1.5°C requires reductions in global greenhouse gas emissions of 43 per cent by 2030 relative to the 2019 level. The decisions served to emphasize the urgent need for immediate, deep, rapid and

sustained reductions in greenhouse gas emissions across all applicable sectors, including through increasing the use of low-emission and renewable energy, just energy transition partnerships and other cooperative actions. The critical need to increase support for developing countries by means of finance, technology and capacity-building to enable them to enhance their adaptation and mitigation efforts was underlined.

5. In line with the commitment of parties to the full implementation of the Paris Agreement, the Sharm el-Sheikh Implementation Plan serves to reiterate the call upon parties made in decision 1/CP.26 of the Glasgow Climate Pact of 2021 “to accelerate the development, deployment and dissemination of technologies, and the adoption of policies, to transition towards low-emission energy systems, including by rapidly scaling up the deployment of clean power generation and energy efficiency measures, including accelerating efforts towards the phase-down of unabated coal power and phase-out of inefficient fossil fuel subsidies, while providing targeted support to the poorest and most vulnerable in line with national circumstances and recognizing the need for support towards a just transition”. In addition, the importance of international collaboration on innovative climate action, including technological advancement, across all actors of society, sectors and regions is noted in the Implementation Plan.

6. The United Nations Climate Change Conference delivered a large number of significant substantive outcomes across all bodies: the Conference of the Parties to the Convention adopted 27 decisions, the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol adopted 9 decisions and the Conference of the Parties serving as the Meeting of Parties to the Paris Agreement adopted 24 decisions.

7. The outcomes of six key substantive negotiation areas were particularly important and impactful: loss and damage, finance, just transition, adaptation, mitigation and agriculture. The outcomes were as follows:

(a) Funding for loss and damage was considered by the Conference of the Parties of the Convention and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement for the first time, with the governing bodies adopting decisions to establish a fund for responding to loss and damage that is to be made operational as soon as possible. Decisions were also adopted to establish institutional arrangements for enabling the full operationalization of the Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change;

(b) With regard to finance, there was a call for the reform of multilateral development banks to address the global climate emergency. The need to mobilize climate finance from all sources to reach the level needed to achieve the goals of the Paris Agreement, beyond $100 billion per year, was confirmed, and the need to significantly strengthen the ad hoc work programme on a new collective quantified goal on climate finance in the light of the urgency of scaling up climate action with a view to achieving meaningful outcomes in 2024 was recognized;

(c) The establishment of a work programme on just transition for the discussion of pathways to achieving the goals of the Paris Agreement was agreed. The first annual high-level ministerial round table on just transition is to be organized, as part of the work programme, at the fifth session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement. During the fifty-eighth session of the subsidiary bodies, parties discussed the content of the just transition work programme, such as the objective, scope, institutional arrangements, modalities, linkages, and inputs and outcomes;

(d) With regard to adaptation, parties noted progress but recognized challenges experienced by developing countries in accessing funding and support from the Green Climate Fund for the formulation and implementation of national adaptation plans, which is also important for informing the global stocktake in 2023 and the assessment of progress towards achieving the global goal on adaptation;

(e) With regard to mitigation, elements for the operationalization of the mitigation work programme, which was established at twenty-sixth session of the Conference of the Parties to the Convention, were finalized with a view to urgently scaling up mitigation ambition and implementation. For cooperation approaches under article 6 of the Paris Agreement, the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement further defined the rules and modalities for internationally transferred mitigation outcomes for market mechanisms as outlined in article 6, paragraphs 2 and 4, which is another step forward towards the implementation of multilateral trading of emissions reductions;

(f) The parties established a new four-year workstream on agriculture and food security that is focused on the implementation of climate action while promoting a holistic approach to addressing issues related to agriculture and food security, including the implementation of the outcomes of the Koronivia joint work on agriculture and previous activities addressing issues related to agriculture.

8. The Conference recognized the important role of non-party stakeholders, including civil society, Indigenous Peoples, local communities, young people, children, local and regional governments and other stakeholders, in contributing to progress towards the objective set out in article 2 of the Convention, as well as the goals of the Paris Agreement. The work of the Marrakech Partnership for Global Climate Action for enhancing ambition and the leadership and actions of the high-level climate champions were welcomed, and the need for continued acceleration and collaboration between parties and non-party stakeholders was emphasized. In addition, the parties invited the secretariat to ensure greater accountability of voluntary initiatives through the Global Climate Action portal.

2. High-level segment and events of the presidency of the Conference of the Parties

9. The first part of the joint high-level segment of the twenty-seventh session of the Conference of the Parties, the seventeenth session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol and the fourth session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement was held on 7 and 8 November, as part of the Sharm el-Sheikh Climate Implementation Summit. The resumed joint high-level segment was held on 15 and 16 November.

10. At the opening ceremony of the Summit, statements were delivered by the President of Egypt, Abdel Fattah Al Sisi; the Secretary-General of the United Nations, António Guterres; the President of the United Arab Emirates, Sheikh Mohamed bin Zayed Al Nahyan; the President of Senegal, Macky Sall; a climate activist from Uganda, Leah Namugerwa; the former Vice-President of the United States of America, Al Gore; the Professor of Climate Modelling, Veronika Eyring; and the Prime Minister of Barbados, Mia Amor Mottley.

11. During the high-level segment, 171 national statements were delivered, of which 91 were by Heads of State, 6 by Vice-Presidents, 1 by Deputy Prime Ministers and 76 by ministers or representatives of parties.

12. Statements were also made by representatives of 33 observer constituencies, including business and industry non-governmental organizations (NGOs),

environmental NGOs, farmer NGOs, Indigenous People's organizations, local governments, municipal authorities and intergovernmental and regional organizations, research and independent NGOs, trade union NGOs, women and gender NGOs, youth NGOs and faith-based NGOs.

13. Pursuant to its decision 1/CP.20, the Conference of the Parties convened a high-level event on global climate action that provided opportunities for strengthening high-level engagement in the implementation of policy options and climate action, for taking stock of progress in sectoral breakthroughs derived from the Climate Action Pathways and in the Race to Zero and Race to Resilience campaigns, and for achieving effective high-level engagement of dignitaries of parties, international organizations and non-party stakeholders.

14. Under the guidance of the presidency of the twenty-seventh session of the Conference of the Parties, three high-level events were convened during the Conference:

(a) During the first high-level ministerial dialogue on a new collective quantified goal, the reports on technical expert dialogues provided ministers with guidance on the direction in which the ad hoc work programme should be taken for the following year;

(b) At the fifth high-level ministerial dialogue on long-term climate finance, ministers discussed progress on and fulfilment of the goal of jointly mobilizing $100 billion per year by 2020, in the context of meaningful mitigation action and transparency on implementation;

(c) The first annual high-level ministerial round table on pre-2030 ambition provided a unique opportunity to help set the global direction on pre-2030 mitigation ambition and implementation and served as a platform for discussing ways to put the global community firmly on the path towards achieving the temperature goal of the Paris Agreement.

3. Outcomes of the twenty-seventh session of the Conference of the Parties

15. The following decisions were adopted by the Conference:

(a) 1/CP.27: Sharm el-Sheikh Implementation Plan;

(b) 2/CP.27: Funding arrangements for responding to loss and damage associated with the adverse effects of climate change, including a focus on addressing loss and damage;

(c) 3/CP.27: Sharm el-Sheikh joint work on implementation of climate action on agriculture and food security;

(d) 4/CP.27: Revision of modalities and procedures for international assessment and review;

(e) 5/CP.27: Revision of modalities and guidelines for international consultation and analysis;

(f) 6/CP.27: Revision of the United Nations Framework Convention on Climate Change reporting guidelines on annual inventories for parties included in annex I to the Convention;

(g) 7/CP.27: Common metrics used to calculate the carbon dioxide equivalence of anthropogenic greenhouse gas emissions by sources and removals by sinks;

(h) 8/CP.27: Report of the Adaptation Committee for 2022 and review of the progress, effectiveness and performance of the Adaptation Committee;

(i) 9/CP.27: National adaptation plans;

(j) 10/CP.27: Matters relating to the least developed countries;

(k) 11/CP.27: Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change under the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts;

(l) 12/CP.27: Report of the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts;

(m) 13/CP.27: Long-term climate finance;

(n) 14/CP.27: Matters relating to the Standing Committee on Finance;

(o) 15/CP.27: Terms of reference for the second review of the functions of the Standing Committee on Finance;

(p) 16/CP.27: Report of the Green Climate Fund to the Conference of the Parties and guidance to the Green Climate Fund;

(q) 17/CP.27: Report of the Global Environment Facility (GEF) to the Conference of the Parties and guidance to GEF;

(r) 18/CP.27: Enhancing climate technology development and transfer through the Technology Mechanism;

(s) 19/CP.27: Annual technical progress report of the Paris Committee on Capacity-building for 2022;

(t) 20/CP.27: Report of the forum on the impact of the implementation of response measures;

(u) 21/CP.27: Second periodic review of the long-term global goal under the Convention and of overall progress towards achieving it;

(v) 22/CP.27: Implementation of the Global Climate Observing System;

(w) 23/CP.27: Action plan under the Glasgow work programme on Action for Climate Empowerment;

(x) 24/CP.27: Intermediate review of the implementation of the gender action plan;

(y) 25/CP.27: Dates and venues of future sessions;

(z) 26/CP.27 Administrative, financial and institutional matters;

(aa) 27/CP.27 Administrative, financial and institutional matters.

4. Outcomes of the seventeenth session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol

16. The following decisions were adopted by the Conference:

(a) 1/CMP.17: Date of completion of the expert review process under article 8 of the Kyoto Protocol for the second commitment period;

(b) 2/CMP.17: Guidance relating to the clean development mechanism;

(c) 3/CMP.17: Guidance on the implementation of article 6 of the Kyoto Protocol;

(d) 4/CMP.17: Report of the Adaptation Fund Board for 2022;

(e) 5/CMP.17: Fourth review of the Adaptation Fund;

(f) 6/CMP.17: Compliance Committee;

(g) 7/CMP.17: Report of the forum on the impact of the implementation of response measures;

(h) 8/CMP.17: Administrative, financial and institutional matters;

(i) 9/CMP.17: Administrative, financial and institutional matters.

5. Outcomes of the fourth session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement

17. The following decisions were adopted by the Conference:

(a) 1/CMA.4: Sharm el-Sheikh Implementation Plan;

(b) 2/CMA.4: Funding arrangements for responding to loss and damage associated with the adverse effects of climate change, including a focus on addressing loss and damage;

(c) 3/CMA.4: Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation referred to in decision 7/CMA.3;

(d) 4/CMA.4: Sharm el-Sheikh mitigation ambition and implementation work programme;

(e) 5/CMA.4: New collective quantified goal on climate finance;

(f) 6/CMA.4: Matters relating to cooperative approaches referred to in article 6, paragraph 2, of the Paris Agreement;

(g) 7/CMA.4: Guidance on the mechanism established by article 6, paragraph 4, of the Paris Agreement;

(h) 8/CMA.4: Matters relating to the work programme under the framework for non-market approaches referred to in article 6, paragraph 8, of the Paris Agreement;

(i) 9/CMA.4: Reviews on a voluntary basis of the information reported pursuant to decision 18/CMA.1, annex, chapter IV, and respective training courses needed;

(j) 10/CMA.4: Report of the Adaptation Committee for 2022 and review of the progress, effectiveness and performance of the Adaptation Committee;

(k) 11/CMA.4: Matters relating to the least developed countries;

(l) 12/CMA.4: Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change under the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts;

(m) 13/CMA.4: Report of the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts;

(n) 14/CMA.4: Matters relating to the Standing Committee on Finance;

(o) 15/CMA.4: Terms of reference for the second review of the functions of the Standing Committee on Finance;

(p) 16/CMA.4: Guidance to the Green Climate Fund;

(q) 17/CMA.4: Guidance to the Global Environment Facility;

(r) 18/CMA.4: Matters relating to the Adaptation Fund;

(s) 19/CMA.4: Enhancing climate technology development and transfer to support implementation of the Paris Agreement;

(t) 20/CMA.4: First periodic assessment referred to in paragraph 69 of decision 1/CP.21;

(u) 21/CMA.4: Annual technical progress report of the Paris Committee on Capacity-building for 2022;

(v) 22/CMA.4: Action plan under the Glasgow work programme on Action for Climate Empowerment;

(w) 23/CMA.4: Report of the forum on the impact of the implementation of response measures;

(x) 24/CMA.4: Rules of procedure of the committee to facilitate implementation and promote compliance referred to in article 15, paragraph 2, of the Paris Agreement.

6. Conclusions and recommendations

18. The General Assembly may wish:

(a) To take note of the report of the Executive Secretary of the United Nations Framework Convention on Climate Change, transmitted by the Secretary-General;

(b) To welcome the outcomes of the twenty-seventh session of the Conference of the Parties, the seventeenth session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol and the fourth session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement, presided over by the Government of Egypt in Sharm el-Sheikh, from 6 to 20 November 2022;

(c) To urge parties to the Convention that have not yet ratified the Paris Agreement to expedite their relevant domestic procedures and to promptly deposit their instruments of ratification, acceptance, approval or accession, where appropriate, in order to ensure its universality;

(d) To urge parties to respond swiftly to the calls for enhanced climate action and support contained in the Sharm el-Sheikh Implementation Plan, including revisiting and strengthening the 2030 targets in their nationally determined contributions;

(e) To call upon parties that have not yet submitted their long-term low-emissions development strategies, national adaptation plans or adaptation communications to accelerate work on their preparation and submit them to the Convention secretariat;

(f) To invite the Executive Secretary to continue to report to it on the work of the Conference of the Parties, the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol and the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement.

II. Report of the Executive Secretary of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa

A. Introduction

19. In its resolution 77/166, the General Assembly requested the Secretary-General to submit to the Assembly at its seventy-eighth session a report on the implementation of the resolution. The present report constitutes an update for the General Assembly on the principal activities that have been undertaken in that respect.

B. Consideration by the General Assembly of the outcome of the fifteenth session of the Conference of the Parties to the Convention

20. The seventy-seventh session of the General Assembly opened four months after the fifteenth session of the Conference of the Parties to the Convention, which was held in Abidjan, Côte d'Ivoire, in May 2022. In its resolution 77/166, the Assembly welcomed the decisions of the Conference of the Parties. It took note of the Abidjan Call, which urged giving the highest priority to the issue of drought prevention, resilience, impact mitigation and accelerating the implementation of existing national commitments, towards achieving land degradation neutrality by 2030 and raising ambition for investments in large-scale land restoration projects and programmes, which also helped countries and communities to prepare for and mitigate the impacts of drought. In addition, the Assembly welcomed the establishment of an intergovernmental working group to oversee the midterm evaluation process related to the 2018–2030 Strategic Framework of the Convention, which is to present its findings and recommendations to the parties for their consideration at the sixteenth session of the Conference of the Parties. Agreeing with the Conference of the Parties, the Assembly echoed the invitation to parties to the Convention to take measures to ensure, as appropriate, that their relevant institutions integrated drought risk management, sustainable livestock and agricultural policies, drought forecasting work, sustainable water management and climate information and climate change impact assessments into relevant policymaking processes and initiatives.

21. The General Assembly reaffirmed the continuation, for a further five-year period, of the current institutional linkage and related administrative arrangements with the Secretariat, to be reviewed by both the Assembly and the Conference of the Parties by no later than 31 December 2026. In addition, it decided to include, in the United Nations calendar of conferences and meetings for 2023 and subsequent years, the sessions of the Conference of the Parties to the Convention and each of its subsidiary bodies and requested the Secretary-General to continue to make provisions for those sessions in the proposed programme budgets.

C. Global celebration of Desertification and Drought Day and outreach activities

22. Declared by the General Assembly in 1995, the World Day to Combat Desertification and Drought is observed every year on 17 June to promote public awareness of international efforts to combat desertification, land degradation and drought. Since 2019, it has been known as Desertification and Drought Day. The theme for the global celebrations in 2023 was "Her Land. Her Rights" as a call to all stakeholders to advance women's land rights.

23. The global observance event was held in the General Assembly in New York on 16 June 2023 and was organized jointly by the Convention secretariat, the United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women), the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP) and the Human Rights Office. Among those who addressed the event were the President of the seventy-seventh session of the General Assembly, the Secretary-General, the Prime Ministers of Namibia and Iceland, the Vice-President of the Government of Spain, the Minister of Indigenous Peoples of Brazil, the Acting Assistant Secretary of the Bureau of Oceans and International Environmental and Scientific Affairs of the United States, the President of the fifteenth session of the Conference of the Parties, the Deputy Secretary-General of the United Nations, the Director General of FAO, the Administrator of UNDP, the Executive Secretary of the Convention, the Executive Director of UN-Women, Convention Land Ambassadors and representatives of civil society organizations.

24. Other commemorative events took place across the world, with events in some 40 countries, including Argentina, Brazil, Chad, China, Egypt, India, Italy, Kenya, Malta, Mexico, Morocco, the Niger, Nigeria, North Macedonia, the Republic of Korea, Saudi Arabia, Serbia, Thailand, the United States, Venezuela (Bolivarian Republic of) and Viet Nam. Global media outreach around Desertification and Drought Day in 2023 resulted in over 1,000 print and online articles, while over 300 million people were reached through social media.

D. Status of land restoration on the path to achieving land degradation neutrality: global policy initiatives on contribution of land restoration and sustainable land management

1. Global land initiatives of the Group of 20

25. The leaders of the Group of 20, meeting in November 2020 in Riyadh, issued a Leader's Declaration in which they stated that coordinated global action, solidarity and multilateral cooperation were necessary more than ever before to overcome present challenges and realize opportunities of the twenty-first century for all by empowering people, safeguarding the planet and shaping new frontiers. Over the past two years, the Group of 20 presidencies have promoted the restoration of peatlands and mangroves, as well as land affected by mining and forest fires.

2. Moving towards achieving land degradation neutrality through land restoration

26. Parties continued to participate in the process for setting land degradation neutrality targets, with 130 countries involved as of June 2023. Of those countries, a total of 109 have set voluntary land degradation neutrality targets and 107 have produced final national land degradation neutrality reports. Some 102 of the reports are available on the Convention website.

27. A second phase of the target-setting programme, including a GEF-funded enabling activity project, was launched on 12 May 2023 with the aim of helping parties that have already set targets to consider reviewing and refining them in order to ensure that land degradation neutrality targets are specific, time-bound, policy-coherent, quantitative, spatially explicit, gender-responsive, and adequately integrated into planning frameworks. This includes a project to facilitate the integration of land degradation neutrality into land use planning frameworks to strengthen national Convention-enabling environments, which will be rolled out in a coordinated manner in 15 pilot countries.

28. To follow up on relevant decisions of the fifteenth session of the Conference of the Parties, the Global Mechanism of the Convention has been focusing on developing the capacity of country parties to improve intersectoral coordination with relevant sectors, policies and plans, such as those relating to biodiversity, climate change and agriculture, issues for which larger pools of funding are often available. In addition, it has been facilitating gender-responsive, large-scale integrated landscape investment programmes and flagship initiatives that support work on sustainable land management and drought resilience, such as the partnership for project preparation. A total of 74 countries have requested support to develop national and/or regional concept notes, and steady progress is being made in turning national plans and concept notes into bankable projects worthy of investment.

29. A number of flagship initiatives on land restoration are being promoted. Examples include the five-year, $1.5 billion Abidjan Legacy Programme, focused on tackling deforestation and on promoting forest restoration to restore 20 per cent of the Ivorian forest by 2030. Similarly, the Great Green Wall for the Sahara and the Sahel Initiative has seen accelerating progress. Two years on from the One Planet Summit, 80 per cent of the $19 billion pledged towards the Great Green Wall has been programmed across the 11 African nations that are part of the Initiative. The Great Green Wall accelerator has helped to identify and match funding for 150 projects covering all countries that are part of the Initiative – from Senegal to Djibouti; national Great Green Wall coalitions have been established in 9 out of 11 countries, bringing together governments, international donors, the private sector and civil society to chart the way forward for the implementation of the Initiative in different countries.

30. The Initiative is also being supported through collaboration with GEF and other partners, as are emerging initiatives in the small island developing States in the Caribbean and the Pacific and the dry corridor of Central America, and the Greening Drylands Partnership.

31. In view of the substantial interest of parties to the Convention in debt-for-nature swaps, sustainability-linked bonds and green bonds, efforts to explore the practical implementation of such instruments in some parties to the Convention are also being supported.

32. To address the issue of disruptive financial innovations and technologies that could play a key role in advancing global efforts to address desertification, land degradation and drought, the Global Mechanism of the Convention released a new report entitled “Financial and digital inclusion for last mile payments: trends, sustainable land use and disruptive financial service options” to explore elements such as mobile banking and carbon credits that could help parties to address the challenges of land degradation and drought while empowering the most vulnerable and underserved populations, in particular women and young people.

33. The Convention is also supporting work, in collaboration with the Land Degradation Neutrality Fund and its Technical Assistance Fund, on viable land-friendly and climate-smart global, regional, and local value chains.

34. In addition, the Convention has supported land restoration programmes including the Peace Forest Initiative, which seeks to contribute to enhanced peace and security through the management and development of natural resources such as land, water and forest in environmentally fragile and (post-)conflict-affected situations, linking Sustainable Development Goals 15 and 16, and in this context organized the first regional workshop from 6 to 9 June 2023 in Nairobi, with the participation of the East African countries.

E. Latest developments on drought policies

35. Droughts continue to pose significant challenges worldwide. To follow up on the decision at the fifteenth session of the Conference of the Parties to create an intergovernmental working group during the triennium 2022–2024 in order to identify and evaluate all options for effectively managing drought under the Convention, a series of meetings was convened. On 29 and 30 November 2022, initial consultations among members of the working group were held in Bonn, Germany, culminating in the decision to develop an evaluation scheme to assess various policy options and tools. On 14 and 15 March 2023, the working group convened its second meeting in Yerevan. The meeting provided a platform for in-depth discussions and further refinement of the evaluation scheme for identifying policy options to enhance the international system in order to better respond to and manage droughts. Meanwhile, from 21 to 23 June 2023, the third meeting of the working group was held in Madrid, at which a progress report was prepared for consideration by the parties to the Convention. The report outlines the eight options that the members of the intergovernmental working group are currently analysing, among which are: (a) legally binding options, for example an amendment to the text of the Convention or the elaboration of a new protocol under the Convention; (b) technical options, for example the definition of a global target on drought resilience or the creation of a global work programme; (c) finance options, for example the creation of new funding instruments or the strengthening of current financial mechanisms such as the GEF or the Global Mechanism; and (d) non-legally binding options, for example instruments within the Convention such as a decision or declaration by the Conference of the Parties or instruments outside the Convention such as decisions of the United Nations Environment Assembly of the United Nations Environment Programme, or General Assembly resolutions. The intergovernmental working group will continue discussions and make recommendations to the sixteenth session of the Conference of the Parties, which will be held in December 2024 in Saudi Arabia.

36. In recognition of the urgent need to enhance drought resilience at the highest political level, the International Drought Resilience Alliance was launched by the President of Senegal and the Prime Minister of Spain on 7 November 2022 at the World Leaders Summit of the twenty-seventh session of the Conference of the Parties to the United Nations Framework Convention on Climate Change. The Alliance brings together over 30 countries and more than 20 entities working together to change how the world tackles the growing drought risks. The inaugural meeting of its Steering Committee was held in New York on 23 March 2023, on the margins of the United Nations Conference on the Midterm Comprehensive Review of the Implementation of the Objectives of the International Decade for Action, “Water for Sustainable Development”, 2018–2028. At the high-level meeting, attendees emphasized the importance of elevating drought resilience to the top of the global political agenda and focusing the work of the Alliance on four pillars,[1] with a view to driving transformative action to enhance drought resilience on a global scale.

37. The second forum for the Global Framework on Water Scarcity in Agriculture was held in Praia from 7 to 10 February 2023 under the theme “Making agriculture more resilient for climate change: an opportunity for action and collaboration”. As a founding member of the Framework, the secretariat of the Convention to Combat Desertification leads the drought preparedness working group with members including FAO, the World Meteorological Organization, the International Union for Conservation of Nature and Natural Resources and the United Nations Educational, Scientific and Cultural Organization. The secretariat organized a round table entitled

[1] See www.unccd.int/international-drought-resilience-alliance.

"International Drought Resilience Alliance: the way forward". The session provided an excellent opportunity to highlight the role of the Alliance in catalysing political momentum to achieve a transformational change of actions and mindsets towards drought resilience.

F. Collaboration with the Global Environment Facility

38. While the land degradation focal area received just 11.6 per cent of the overall funding ($618 million) under GEF, land degradation neutrality objectives are receiving enhanced support through investments in biodiversity and climate change under either the integrated programmes or multifocal area projects and programmes. The Global Environment Facility Council met in Brasilia from 26 to 29 June 2023 and approved the disbursement of $1.4 billion to fund the work programme of GEF, including $160.9 million on land degradation focal area resources programmed in various national projects and integrated global programmes, most notably $200 million for ecosystem restoration and $248 million for the critical forest biomes integrated programmes, drawing from multiple focal areas in both cases.

G. Partnerships

39. The Convention secretariat engaged in partnerships with organizations and institutions that have convergent or complementary missions to address desertification, land degradation and drought.

40. With droughts becoming more frequent, severe and extended, the secretariat is strengthening partnerships to support affected countries. To enhance the support for parties on drought monitoring, risk assessment and mitigation, the secretariat signed a new partnership with the National Drought Mitigation Center at the University of Nebraska-Lincoln, United States, and renewed its cooperation with the Global Water Partnership.

41. With the aim of accelerating land restoration, in 2022, the 114 member Governments and 144 participating organizations of the Group on Earth Observations launched the flagship GEO Land Degradation Neutrality Initiative to accelerate land restoration for global environmental sustainability. Through this intergovernmental partnership, the Group aims to improve the availability, access and use of open Earth observations, including satellite imagery, remote sensing and in situ data, in order to influence policy and decision-making in a wide range of sectors.

42. To continue to strengthen the sharing of knowledge around sustainable land management, the secretariat has continued its collaboration with the World Overview of Conservation Technologies and Approaches consortium and various other partners in the scientific sector.

43. Partnerships have also been established with the private sector, including through collaboration with the World Economic Forum on relevant uplink challenges. A new partnership project to promote technology transfer was initiated between the DeserTech initiative of the Israel Innovation Institute and the Great Green Wall accelerator with the aim of connecting innovative entrepreneurs from Sahel countries and the Negev desert.

44. To strengthen gender equality in relation to land restoration goals, and in line with requests made by parties at the fifteenth session of the Conference of the Parties to the Convention, the secretariat has engaged with a wide range of United Nations entities, notably UN-Women, FAO, the Office of the United Nations High Commissioner for Human Rights, the United Nations Children's Fund and UNDP, and

other relevant partners including Landesa and the Robert Bosch Foundation, on gender and tenure issues. This was achieved, inter alia, through the "Her Land" campaign, which was launched on International Women's Day in March 2023. The year-long campaign is aimed at promoting successful examples of contributions of women and girls to sustainable land management and drought resilience and mobilizing support to advance land rights for women and girls around the world.

45. To support the implementation of voluntary land degradation neutrality targets, the secretariat renewed its partnership with the Korea Forest Service of the Republic of Korea by extending the Changwon initiative. The initiative will support the setting of land degradation neutrality targets, as well as the Science-Policy Interface of the Convention to Combat Desertification and the showcasing of good practices in sustainable land management. In addition, the secretariat renewed its cooperation with the Swiss Agency for Development and Cooperation, which is aimed at supporting sustainable land management and ensuring that all stakeholders, especially those representing the most vulnerable populations, can be fully involved in global decision-making on land and drought issues.

H. Observations and recommendations

46. During the reporting period, the international community pursued its efforts to address desertification, land degradation and drought. There is increased global awareness of the importance of addressing drought and land degradation. Parties to the Convention have been supported in moving towards achieving land degradation neutrality through land restoration. Most degraded lands are now under restoration programmes at the national, regional and global levels.

47. Droughts have continued to hit many countries on all continents. They have become more frequent, intense, severe and extended, with dire impacts on livelihoods, ecosystems and economies. Dry spells are now amplifying wildfires, adding to the hardships, wreaking devastation and creating health risks. Long droughts are often followed by severe floods, washing away land and crops.

48. There is now a remarkable shift to drought management, currently with an emphasis on enhancing resilience through impactful policies on early warning, preparedness and mitigation. In this respect, the General Assembly may wish to prioritize drought resilience in its deliberations. It may call upon the United Nation entities to mainstream drought resilience into their programmes when supporting countries prone to or already affected by droughts.

49. With regard to land restoration, the General Assembly may note various global, regional and national initiatives in place and pursue its policy to encourage Member States to pursue Sustainable Development Goal target 15.3 as an integrator and accelerator to achieve other Goals.

III. Report of the Executive Secretary of the Convention on Biological Diversity

A. Introduction

50. In its resolution 77/167 on the implementation of the Convention on Biological Diversity and its contribution to sustainable development, the General Assembly requested the Secretary-General to report to the Assembly at its seventy-eighth session on the implementation of the resolution and on progress in the implementation of the Convention and the post 2020-global biodiversity framework (referred to as the

Kunming-Montreal Global Biodiversity Framework). The present report is submitted in response to that request.

51. At the time of reporting, 195 States and one regional economic integration organization were party to the Convention; 172 States and one regional economic integration organization were party to the Cartagena Protocol on Biosafety to the Convention, including 51 States and one regional economic integration organization that were also party to the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety; and 139 States and one regional economic integration organization were party to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity.

B. Fifteenth meeting of the Conference of the Parties to the Convention

52. The second part of the fifteenth meeting of the Conference of the Parties to the Convention, the tenth meeting of the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol and the fourth meeting of the Conference of the Parties serving as the meeting of the Parties to the Nagoya Protocol were held in Montreal, Canada, from 7 to 19 December 2022. A high-level segment was held from 15 to 17 December 2022.

53. The meeting was presided over by China and hosted by Canada.

54. More than 10,000 delegates attended, including representatives of 190 parties and other Governments and 898 observer organizations (54 United Nations entities, 70 intergovernmental organizations, 92 organizations of Indigenous Peoples and local communities and 682 civil society organizations). A total of 168 parties to the Cartagena Protocol attended the second part of the tenth meeting, and 134 parties to the Nagoya Protocol attended the second part of the fourth meeting.

55. The Secretary-General and the Prime Minister of Canada, among others, gave addresses at the opening ceremony.

56. The Conference of the Parties adopted 34 decisions,[2] including decision 15/4, by which it adopted the Kunming-Montreal Global Biodiversity Framework, and related decisions on a monitoring framework; on mechanisms for planning, monitoring, reporting and review; on resource mobilization; on capacity-building and technical and scientific cooperation; on benefit-sharing from the use of digital sequence information on genetic resources; and on cooperation with other conventions and international organizations.

57. The Conference also adopted a communications strategy; a gender plan of action; an updated plan of action on subnational governments, cities and other local authorities for biodiversity; and decisions on the financial mechanism, on knowledge management and the clearing-house mechanism, and on a long-term strategic approach to mainstreaming biodiversity within and across sectors.

58. In addition, the Conference of the Parties adopted decisions on informing the scientific and technical evidence base for the Framework, on the programme of work of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, and on the following scientific and technical issues: sustainable wildlife management; marine and coastal biodiversity; ecologically or biologically significant marine areas, including in the North-East Atlantic Ocean and adjacent areas; invasive

[2] Available at www.cbd.int/decisions/cop/?m=cop-15.

alien species; biodiversity and agriculture; biodiversity and health; biodiversity and climate change; and synthetic biology.

59. Lastly, the Conference of the Parties adopted a number of decisions related to Indigenous Peoples and local communities, including on nature and culture; the development of a new programme of work and institutional arrangements on article 8 (j) and related provisions of the Convention related to Indigenous Peoples and local communities; and recommendations from the Permanent Forum on Indigenous Issues to the Convention.

C. Tenth meeting of the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol

60. The Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol adopted 13 decisions,[3] including on an implementation plan and a capacity-building action plan that will support the implementation of the Protocol and the Kunming-Montreal Global Biodiversity Framework; the assessment and review of the effectiveness of the Protocol; monitoring and reporting; and the financial mechanism and resources.

61. Decision CP-10/10, on risk assessment and risk management, sets out a process for developing additional guidance on engineered gene drives, while decision CP-10/11, on the detection and identification of living modified organisms, provides a process for considering how to address elements related to new detection techniques.

62. The Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol and further serving as the meeting of the Parties to the Nagoya-Kuala Lumpur Supplementary Protocol adopted a decision to address further steps for the full and effective implementation of the Supplementary Protocol.

D. Fourth meeting of the Conference of the Parties serving as the meeting of the Parties to the Nagoya Protocol

63. The Conference of the Parties serving as the meeting of the Parties to the Nagoya Protocol adopted 12 decisions,[4] including on compliance with the Protocol; the Access and Benefit-sharing Clearing-House; capacity-building, development and awareness-raising; and the financial mechanism and resources.

64. The Parties to the Nagoya Protocol also adopted decisions addressing further policy development, including a decision on digital sequence information on genetic resources.

E. High-level segment

65. A high-level segment, organized by the Government of China from 15 to 17 December, was attended by ministers, vice-ministers and senior officials of the United Nations and of intergovernmental and non-governmental organizations. Many leaders announced significant actions and commitments in support of the post-2020 global biodiversity framework. In addition, ministers provided political direction and momentum to the final stages of the negotiations, in particular with regard to the

[3] Available at www.cbd.int/conferences/2021-2022/cp-mop-10/documents.
[4] Available at www.cbd.int/decisions/np-mop/?m=np-mop-04.

framework, resource mobilization and digital sequence information on genetic resources.

F. Other events

66. Major events held on the margins of the meeting included the seventh Summit for Subnational Governments and Cities, a nature and culture summit, a youth summit, the fifth Science-Policy Forum for Biodiversity, the Business and Biodiversity Forum, and Finance and Biodiversity Day, all of which also contribute to the Sharm-el Sheikh to Kunming Action Agenda for Nature and People.

67. In addition, more than 200 side events were organized by participating Governments and organizations, and further events were held by China, Canada, the Rio conventions and other organizations in pavilions and at the multi-stakeholder facility, Place Québec.

G. Kunming-Montreal Global Biodiversity Framework

1. Overview

68. The Kunming-Montreal Global Biodiversity Framework was adopted by the Conference of the Parties to the Convention along with a package of other important decisions, of equal standing, that will support its implementation.

69. The Framework sets out 23 action-oriented targets for urgent action to halt and reverse biodiversity loss and to put nature on a path to recovery for the benefit of people and the planet by 2030, with a view to advancing towards four outcome-oriented goals for 2050 and the vision of living in harmony with nature by 2050.

70. In the Framework, the Conference of the Parties has identified in particular a set of urgent actions required to protect and restore natural ecosystems and ecosystem services and functions for people's needs. It has called for a substantial increase in financial resources, as well as for the strengthening of capacity-building and technical and scientific cooperation, to facilitate the national implementation of the Framework.

71. Achieving the goals and targets will require a whole-of-government, whole-of-society approach.

72. The Framework promotes a human rights-based approach by respecting, protecting, promoting and fulfilling human rights. It also serves to acknowledge the human right to a clean, healthy and sustainable environment.

73. The Framework further serves to acknowledge the role of Indigenous Peoples and local communities as custodians of biodiversity and ensure that their rights over lands, territories, resources and traditional knowledge are respected across all targets. It is also highlighted therein that the targets will be implemented through a gender-responsive approach, and the Framework is supported in that regard by a gender plan of action, also adopted at the same meeting.[5] The implementation of the Framework is to be guided additionally by the principle of intergenerational equity.

74. The Framework is a contribution to the achievement of the 2030 Agenda for Sustainable Development. Progress towards the Sustainable Development Goals and the achievement of sustainable development in its three dimensions is necessary to create the conditions for meeting the goals and targets of the Framework. The Framework will place biodiversity, its conservation, the sustainable use of its

[5] Conference of the Parties decision 15/11.

components and the fair and equitable sharing of benefits arising from the utilization of genetic resources at the heart of the sustainable development agenda.

75. In its decision 15/13, on cooperation with other conventions and international organizations, the Conference of the Parties invited the governing bodies of other biodiversity-related conventions and relevant multilateral environmental agreements, as well as international organizations and other relevant programmes, to formally endorse the Framework through their own governance processes, as appropriate.

2. Implementation and monitoring

76. As noted above, the implementation of the Framework will be supported by other decisions adopted by the Conference of the Parties as a package.

77. Urgent action is required now if the Framework targets are to be met by 2030. Parties to the Convention are requested to revise and update their national biodiversity strategies and action plans so that they are aligned with the Framework goals and targets and to submit them, or at least their national targets, through the clearing-house mechanism of the Convention by the sixteenth meeting of the Conference of the Parties.

78. The Framework includes a target to mobilize, from all sources, at least $200 billion by 2030, including at least $20 billion per year by 2025 and $30 billion per year by 2030 through international financial resources from developed countries and from countries that voluntarily assume obligations of developed country parties to developing countries. The Conference of the Parties has adopted a strategy for resource mobilization to support the implementation of the Framework and established an advisory committee to further develop the strategy. In compliance with its request, GEF is also establishing a special trust fund to support the implementation of the Framework.

79. The secretariat of the Convention, the United Nations Environment Programme, UNDP and other partner organizations are all supporting the implementation of the Framework, building on existing cooperation and following guidance from the Conference of the Parties. This support includes financial assistance from GEF for enabling activities, including the Early Action Support projects; the National Biodiversity Strategy and Action Plan Accelerator Partnership; engagement by the United Nations development system, resident coordinators and country teams; and the implementation of the United Nations common approach to biodiversity, with support from the United Nations Environment Management Group.

3. Digital sequence information on genetic resources

80. Decision 15/9, on digital sequence information on genetic resources, contains a landmark agreement to share fairly and equitably the benefits arising from the use of such information. This commitment brings access and benefit-sharing to the digital age and represents a significant step forward towards generating resources for biodiversity and strengthening capacity-building and development, technology transfer and technical and scientific cooperation. The Conference of the Parties recognized that benefits should be used in particular to support the conservation and sustainable use of biological diversity and, inter alia, to benefit Indigenous Peoples and local communities. It decided to establish a fair, transparent, inclusive, participatory and time-bound process to develop and operationalize a multilateral mechanism for benefit-sharing from the use of digital sequence information on genetic resources, to be finalized at its sixteenth meeting.

H. International Day for Biological Diversity

81. The theme of the International Day for Biological Diversity, which was commemorated on 22 May 2023, was “From agreement to action: build back biodiversity”. It was chosen to mark the adoption of the Framework and the efforts made to ensure its timely implementation.

82. The Central Government of China and the provincial government of Yunnan hosted a celebration of the International Day in Kunming, China. The secretariat of the Convention organized an event in Montreal, with the participation of the Government of Canada, the government of Quebec and the city of Montreal. Celebrations were also held in many other countries.

83. The secretariat received messages from current and previous presidencies of meetings of the Conference of the Parties and other Governments, as well as from United Nations agencies and international organizations.[6]

I. Sixteenth meeting of the Conference of the Parties to the Convention

84. The sixteenth meeting of the Conference of the Parties to the Convention and the concurrent meetings of the Conferences of the Parties serving as the meetings of the Parties to the Cartagena and Nagoya Protocols will be held in Türkiye from 21 October to 1 November 2024.

J. Recommendations

85. The General Assembly may wish to:

(a) Welcome the outcomes of the fifteenth meeting of the Conference of the Parties to the Convention and express its appreciation to China, as President of the meeting, and Canada, as host of the second part of the meeting;

(b) Reiterate its appreciation to Türkiye as host of the sixteenth meeting;

(c) Endorse the Kunming-Montreal Global Biodiversity Framework as a contribution to the implementation of the 2030 Agenda and the achievement of the Sustainable Development Goals;

(d) Call upon the parties to the Convention and all Member States to ensure and promote the full and swift implementation of the Framework, including by, as appropriate, developing national targets aligned with those of the Framework, updating national biodiversity strategies and action plans and developing the policy measures necessary to ensure progress towards the national and global targets, using a whole-of-government, whole-of-society approach;

(e) Welcome the strategy for resource mobilization for the Framework as guidance to facilitate the immediate mobilization of resources;

(f) Call upon developed country parties, in accordance with their obligations under the Convention, and invite other developed country Member States, and others that are in position to do so, as well as philanthropic organizations and the private sector, to mobilize international financial flows to developing countries for the implementation of the Framework, in line with its targets, and to ensure the early capitalization of the related fund established by GEF;

[6] Available at www.cbd.int/article/idb2023-messages-governments.

(g) Welcome the agreement to establish a multilateral mechanism for benefit-sharing from the use of digital sequence information on genetic resources, including a global fund, and call upon parties and all Member States to engage in ongoing negotiations for the further development of the Mechanism before the sixteenth meeting of the Conference of the Parties;

(h) Underline the importance of monitoring progress in the implementation of the Framework and of keeping implementation under review, and encourage cooperation and synergies in support of the assessment of progress in the implementation of the Sustainable Development Goals;

(i) Welcome the adoption of the international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, and note that its early ratification will contribute to the successful implementation of the Framework in such areas;

(j) Note that the Framework is to be implemented with consideration of the One Health approach and that it will contribute to pandemic prevention, preparedness and response;

(k) Call upon all Member States that have not yet done so to ratify or accede to the Convention, the Nagoya Protocol, the Cartagena Protocol and the Nagoya-Kuala Lumpur Supplementary Protocol.