Annex 1

COUR INTERNATIONALE DE JUSTICE

RECUEIL DES ARRÊTS,
AVIS CONSULTATIFS ET ORDONNANCES

CONSÉQUENCES JURIDIQUES DE L'ÉDIFICATION D'UN MUR DANS LE TERRITOIRE PALESTINIEN OCCUPÉ

AVIS CONSULTATIF DU 9 JUILLET 2004

2004

INTERNATIONAL COURT OF JUSTICE

REPORTS OF JUDGMENTS,
ADVISORY OPINIONS AND ORDERS

LEGAL CONSEQUENCES OF THE CONSTRUCTION OF A WALL IN THE OCCUPIED PALESTINIAN TERRITORY

ADVISORY OPINION OF 9 JULY 2004

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9 July 2004

LEGAL CONSEQUENCES OF THE CONSTRUCTION OF A WALL IN THE OCCUPIED PALESTINIAN TERRITORY

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* *

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* *

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* *

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* *

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* *

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* *

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ADVISORY OPINION

Present: *President* SHI; *Vice-President* RANJEVA; *Judges* GUILLAUME, KOROMA, VERESHCHETIN, HIGGINS, PARRA-ARANGUREN, KOOIJMANS, REZEK, AL-KHASAWNEH, BUERGENTHAL, ELARABY, OWADA, SIMMA, TOMKA; *Registrar* COUVREUR.

On the legal consequences of the construction of a wall in the Occupied Palestinian Territory,

THE COURT,

composed as above,

gives the following Advisory Opinion:

1. The question on which the advisory opinion of the Court has been requested is set forth in resolution ES-10/14 adopted by the General Assembly of the United Nations (hereinafter the "General Assembly") on 8 December 2003 at its Tenth Emergency Special Session. By a letter dated 8 December 2003 and received in the Registry by facsimile on 10 December 2003, the original of which reached the Registry subsequently, the Secretary-General of the United Nations officially communicated to the Court the decision taken by the General Assembly to submit the question for an advisory opinion. Certified true copies of the English and French versions of resolution ES-10/14 were enclosed with the letter. The resolution reads as follows:

"*The General Assembly*,

Reaffirming its resolution ES-10/13 of 21 October 2003,

Guided by the principles of the Charter of the United Nations,

Aware of the established principle of international law on the inadmissibility of the acquisition of territory by force,

Aware also that developing friendly relations among nations based on respect for the principle of equal rights and self-determination of peoples is among the purposes and principles of the Charter of the United Nations,

Recalling relevant General Assembly resolutions, including resolution 181 (II) of 29 November 1947, which partitioned mandated Palestine into two States, one Arab and one Jewish,

Recalling also the resolutions of the tenth emergency special session of the General Assembly,

Recalling further relevant Security Council resolutions, including resolutions 242 (1967) of 22 November 1967, 338 (1973) of 22 October 1973, 267 (1969) of 3 July 1969, 298 (1971) of 25 September 1971, 446 (1979) of 22 March 1979, 452 (1979) of 20 July 1979, 465 (1980) of 1 March 1980, 476 (1980) of 30 June 1980, 478 (1980) of 20 August 1980, 904 (1994) of 18 March 1994, 1073 (1996) of 28 September 1996, 1397 (2002) of 12 March 2002 and 1515 (2003) of 19 November 2003,

Reaffirming the applicability of the Fourth Geneva Convention[1] as well as Additional Protocol I to the Geneva Conventions[2] to the Occupied Palestinian Territory, including East Jerusalem,

Recalling the Regulations annexed to the Hague Convention Respecting the Laws and Customs of War on Land of 1907[3],

Welcoming the convening of the Conference of High Contracting Parties to the Fourth Geneva Convention on measures to enforce the Convention in the Occupied Palestinian Territory, including Jerusalem, at Geneva on 15 July 1999,

Expressing its support for the declaration adopted by the reconvened Conference of High Contracting Parties at Geneva on 5 December 2001,

Recalling in particular relevant United Nations resolutions affirming that Israeli settlements in the Occupied Palestinian Territory, including East Jerusalem, are illegal and an obstacle to peace and to economic and social development as well as those demanding the complete cessation of settlement activities,

Recalling relevant United Nations resolutions affirming that actions taken by Israel, the occupying Power, to change the status and demographic composition of Occupied East Jerusalem have no legal validity and are null and void,

Noting the agreements reached between the Government of Israel and the Palestine Liberation Organization in the context of the Middle East peace process,

Gravely concerned at the commencement and continuation of construction by Israel, the occupying Power, of a wall in the Occupied Palestinian Territory, including in and around East Jerusalem, which is in departure from the Armistice Line of 1949 (Green Line) and which has involved the confiscation and destruction of Palestinian land and resources, the disruption of the lives of thousands of protected civilians and the de facto annexation of large areas of territory, and underlining the unanimous opposition by the international community to the construction of that wall,

Gravely concerned also at the even more devastating impact of the projected parts of the wall on the Palestinian civilian population and on the prospects for solving the Palestinian-Israeli conflict and establishing peace in the region,

Welcoming the report of 8 September 2003 of the Special Rapporteur of the Commission on Human Rights on the situation of human rights in the Palestinian territories occupied by Israel since 1967[4], in particular the section regarding the wall,

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[1] United Nations, *Treaty Series*, Vol. 75, No. 973.

[2] *Ibid.*, Vol. 1125, No. 17512.

[3] See Carnegie Endowment for International Peace, *The Hague Conventions and Declarations of 1899 and 1907* (New York, Oxford University Press, 1915).

[4] E/CN.4/2004/6.

Affirming the necessity of ending the conflict on the basis of the two-State solution of Israel and Palestine living side by side in peace and security based on the Armistice Line of 1949, in accordance with relevant Security Council and General Assembly resolutions,

Having received with appreciation the report of the Secretary-General, submitted in accordance with resolution ES-10/13[5],

Bearing in mind that the passage of time further compounds the difficulties on the ground, as Israel, the occupying Power, continues to refuse to comply with international law vis-à-vis its construction of the above-mentioned wall, with all its detrimental implications and consequences,

Decides, in accordance with Article 96 of the Charter of the United Nations, to request the International Court of Justice, pursuant to Article 65 of the Statute of the Court, to urgently render an advisory opinion on the following question:

> What are the legal consequences arising from the construction of the wall being built by Israel, the occupying Power, in the Occupied Palestinian Territory, including in and around East Jerusalem, as described in the report of the Secretary-General, considering the rules and principles of international law, including the Fourth Geneva Convention of 1949, and relevant Security Council and General Assembly resolutions?

[5] A/ES-10/248."

Also enclosed with the letter were the certified English and French texts of the report of the Secretary-General dated 24 November 2003, prepared pursuant to General Assembly resolution ES-10/13 (A/ES-10/248), to which resolution ES-10/14 makes reference.

2. By letters dated 10 December 2003, the Registrar notified the request for an advisory opinion to all States entitled to appear before the Court, in accordance with Article 66, paragraph 1, of the Statute.

3. By a letter dated 11 December 2003, the Government of Israel informed the Court of its position on the request for an advisory opinion and on the procedure to be followed.

4. By an Order of 19 December 2003, the Court decided that the United Nations and its Member States were likely, in accordance with Article 66, paragraph 2, of the Statute, to be able to furnish information on all aspects raised by the question submitted to the Court for an advisory opinion and fixed 30 January 2004 as the time-limit within which written statements might be submitted to it on the question in accordance with Article 66, paragraph 4, of the Statute. By the same Order, the Court further decided that, in the light of resolution ES-10/14 and the report of the Secretary-General transmitted with the request, and taking into account the fact that the General Assembly had granted Palestine a special status of observer and that the latter was co-sponsor of the draft resolution requesting the advisory opinion, Palestine might also submit a written statement on the question within the above time-limit.

5. By the aforesaid Order, the Court also decided, in accordance with

Article 105, paragraph 4, of the Rules of Court, to hold public hearings during which oral statements and comments might be presented to it by the United Nations and its Member States, regardless of whether or not they had submitted written statements, and fixed 23 February 2004 as the date for the opening of the said hearings. By the same Order, the Court decided that, for the reasons set out above (see paragraph 4), Palestine might also take part in the hearings. Lastly, it invited the United Nations and its Member States, as well as Palestine, to inform the Registry, by 13 February 2004 at the latest, if they were intending to take part in the above-mentioned hearings. By letters of 19 December 2004, the Registrar informed them of the Court's decisions and transmitted to them a copy of the Order.

6. Ruling on requests submitted subsequently by the League of Arab States and the Organization of the Islamic Conference, the Court decided, in accordance with Article 66 of its Statute, that those two international organizations were likely to be able to furnish information on the question submitted to the Court, and that consequently they might for that purpose submit written statements within the time-limit fixed by the Court in its Order of 19 December 2003 and take part in the hearings.

7. Pursuant to Article 65, paragraph 2, of the Statute, the Secretary-General of the United Nations communicated to the Court a dossier of documents likely to throw light upon the question.

8. By a reasoned Order of 30 January 2004 regarding its composition in the case, the Court decided that the matters brought to its attention by the Government of Israel in a letter of 31 December 2003, and in a confidential letter of 15 January 2004 addressed to the President pursuant to Article 34, paragraph 2, of the Rules of Court, were not such as to preclude Judge Elaraby from sitting in the case.

9. Within the time-limit fixed by the Court for that purpose, written statements were filed by, in order of their receipt: Guinea, Saudi Arabia, League of Arab States, Egypt, Cameroon, Russian Federation, Australia, Palestine, United Nations, Jordan, Kuwait, Lebanon, Canada, Syria, Switzerland, Israel, Yemen, United States of America, Morocco, Indonesia, Organization of the Islamic Conference, France, Italy, Sudan, South Africa, Germany, Japan, Norway, United Kingdom, Pakistan, Czech Republic, Greece, Ireland on its own behalf, Ireland on behalf of the European Union, Cyprus, Brazil, Namibia, Malta, Malaysia, Netherlands, Cuba, Sweden, Spain, Belgium, Palau, Federated States of Micronesia, Marshall Islands, Senegal, Democratic People's Republic of Korea. Upon receipt of those statements, the Registrar transmitted copies thereof to the United Nations and its Member States, to Palestine, to the League of Arab States and to the Organization of the Islamic Conference.

10. Various communications were addressed to these latter by the Registry, concerning in particular the measures taken for the organization of the oral proceedings. By communications of 20 February 2004, the Registry transmitted a detailed timetable of the hearings to those of the latter who, within the time-limit fixed for that purpose by the Court, had expressed their intention of taking part in the aforementioned proceedings.

11. Pursuant to Article 106 of the Rules of Court, the Court decided to make the written statements accessible to the public, with effect from the opening of the oral proceedings.

12. In the course of hearings held from 23 to 25 February 2004, the Court heard oral statements, in the following order, by:

for Palestine:

H.E. Mr. Nasser Al-Kidwa, Ambassador, Permanent Observer of Palestine to the United Nations,

Ms Stephanie Koury, Member, Negotiations Support Unit, Counsel,
Mr. James Crawford, S.C., Whewell Professor of International Law, University of Cambridge, Member of the Institute of International Law, Counsel and Advocate,
Mr. Georges Abi-Saab, Professor of International Law, Graduate Institute of International Studies, Geneva, Member of the Institute of International Law, Counsel and Advocate,
Mr. Vaughan Lowe, Chichele Professor of International Law, University of Oxford, Counsel and Advocate,
Mr. Jean Salmon, Professor Emeritus of International Law, Université libre de Bruxelles, Member of the Institute of International Law, Counsel and Advocate;

for the Republic of South Africa:

H.E. Mr. Aziz Pahad, Deputy Minister for Foreign Affairs, Head of Delegation,
Judge M. R. W. Madlanga, S.C.;

for the People's Democratic Republic of Algeria:

Mr. Ahmed Laraba, Professor of International Law;

for the Kingdom of Saudi Arabia:

H.E. Mr. Fawzi A. Shobokshi, Ambassador and Permanent Representative of the Kingdom of Saudi Arabia to the United Nations in New York, Head of Delegation;

for the People's Republic of Bangladesh:

H.E. Mr. Liaquat Ali Choudhury, Ambassador of the People's Republic of Bangladesh to the Kingdom of the Netherlands;

for Belize:

Mr. Jean-Marc Sorel, Professor at the University of Paris I (Panthéon-Sorbonne);

for the Republic of Cuba:

H.E. Mr. Abelardo Moreno Fernández, Deputy Minister for Foreign Affairs;

for the Republic of Indonesia:

H.E. Mr. Mohammad Jusuf, Ambassador of the Republic of Indonesia to the Kingdom of the Netherlands, Head of Delegation;

for the Hashemite Kingdom of Jordan:

H.R.H. Ambassador Zeid Ra'ad Zeid Al-Hussein, Permanent Representative of the Hashemite Kingdom of Jordan to the United Nations, New York, Head of Delegation,
Sir Arthur Watts, K.C.M.G., Q.C., Senior Legal

	Adviser to the Government of the Hashemite Kingdom of Jordan;
for the Republic of Madagascar:	H.E. Mr. Alfred Rambeloson, Permanent Representative of Madagascar to the Office of the United Nations at Geneva and to the Specialized Agencies, Head of Delegation;
for Malaysia:	H.E. Datuk Seri Syed Hamid Albar, Foreign Minister of Malaysia, Head of Delegation;
for the Republic of Senegal:	H.E. Mr. Saliou Cissé, Ambassador of the Republic of Senegal to the Kingdom of the Netherlands, Head of Delegation;
for the Republic of the Sudan:	H.E. Mr. Abuelgasim A. Idris, Ambassador of the Republic of the Sudan to the Kingdom of the Netherlands;
for the League of Arab States:	Mr. Michael Bothe, Professor of Law, Head of the Legal Team;
for the Organization of the Islamic Conference:	H.E. Mr. Abdelouahed Belkeziz, Secretary General of the Organization of the Islamic Conference, Ms Monique Chemillier-Gendreau, Professor of Public Law, University of Paris VII-Denis Diderot, as Counsel.

* * *

13. When seised of a request for an advisory opinion, the Court must first consider whether it has jurisdiction to give the opinion requested and whether, should the answer be in the affirmative, there is any reason why it should decline to exercise any such jurisdiction (see *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996 (I)*, p. 232, para. 10).

* *

14. The Court will thus first address the question whether it possesses jurisdiction to give the advisory opinion requested by the General Assembly on 8 December 2003. The competence of the Court in this regard is based on Article 65, paragraph 1, of its Statute, according to which the Court "may give an advisory opinion on any legal question at the request of whatever body may be authorized by or in accordance with the Charter of the United Nations to make such a request". The Court has already had occasion to indicate that:

> "It is . . . a precondition of the Court's competence that the advisory opinion be requested by an organ duly authorized to seek it under the Charter, that it be requested on a legal question, and that, except in the case of the General Assembly or the Security Council, that question should be one arising within the scope of the activities of the requesting organ." (*Application for Review of Judgement No. 273 of the United Nations Administrative Tribunal, Advisory Opinion, I.C.J. Reports 1982,* pp. 333-334, para. 21.)

15. It is for the Court to satisfy itself that the request for an advisory opinion comes from an organ or agency having competence to make it. In the present instance, the Court notes that the General Assembly, which seeks the advisory opinion, is authorized to do so by Article 96, paragraph 1, of the Charter, which provides: "The General Assembly or the Security Council may request the International Court of Justice to give an advisory opinion on any legal question."

16. Although the above-mentioned provision states that the General Assembly may seek an advisory opinion "on any legal question", the Court has sometimes in the past given certain indications as to the relationship between the question the subject of a request for an advisory opinion and the activities of the General Assembly (*Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, I.C.J. Reports 1950*, p. 70; *Legality of the Threat or Use of Nuclear Weapons, I.C.J. Reports 1996 (I)*, pp. 232 and 233, paras. 11 and 12).

17. The Court will so proceed in the present case. The Court would observe that Article 10 of the Charter has conferred upon the General Assembly a competence relating to "any questions or any matters" within the scope of the Charter, and that Article 11, paragraph 2, has specifically provided it with competence on "questions relating to the maintenance of international peace and security brought before it by any Member of the United Nations . . ." and to make recommendations under certain conditions fixed by those Articles. As will be explained below, the question of the construction of the wall in the Occupied Palestinian Territory was brought before the General Assembly by a number of Member States in the context of the Tenth Emergency Special Session of the Assembly, convened to deal with what the Assembly, in its resolution ES-10/2 of 25 April 1997, considered to constitute a threat to international peace and security.

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18. Before further examining the problems of jurisdiction that have been raised in the present proceedings, the Court considers it necessary to describe the events that led to the adoption of resolution ES-10/14, by which the General Assembly requested an advisory opinion on the legal consequences of the construction of the wall in the Occupied Palestinian Territory.

19. The Tenth Emergency Special Session of the General Assembly, at which that resolution was adopted, was first convened following the rejection by the Security Council, on 7 March and 21 March 1997, as a result of negative votes by a permanent member, of two draft resolutions concerning certain Israeli settlements in the Occupied Palestinian Territory (see, respectively, S/1997/199 and S/PV.3747, and S/1997/241 and S/PV.3756). By a letter of 31 March 1997, the Chairman of the Arab Group then requested "that an emergency special session of the General Assembly be convened pursuant to resolution 377 A (V) entitled 'Uniting

for Peace' " with a view to discussing "Illegal Israeli actions in occupied East Jerusalem and the rest of the Occupied Palestinian Territory" (letter dated 31 March 1997 from the Permanent Representative of Qatar to the United Nations addressed to the Secretary-General, A/ES-10/1, 22 April 1997, Annex). The majority of Members of the United Nations having concurred in this request, the first meeting of the Tenth Emergency Special Session of the General Assembly took place on 24 April 1997 (see A/ES-10/1, 22 April 1997). Resolution ES-10/2 was adopted the following day; the General Assembly thereby expressed its conviction that:

> "the repeated violation by Israel, the occupying Power, of international law and its failure to comply with relevant Security Council and General Assembly resolutions and the agreements reached between the parties undermine the Middle East peace process and constitute a threat to international peace and security",

and condemned the "illegal Israeli actions" in occupied East Jerusalem and the rest of the Occupied Palestinian Territory, in particular the construction of settlements in that territory. The Tenth Emergency Special Session was then adjourned temporarily and has since been reconvened 11 times (on 15 July 1997, 13 November 1997, 17 March 1998, 5 February 1999, 18 October 2000, 20 December 2001, 7 May 2002, 5 August 2002, 19 September 2003, 20 October 2003 and 8 December 2003).

20. By a letter dated 9 October 2003, the Chairman of the Arab Group, on behalf of the States Members of the League of Arab States, requested an immediate meeting of the Security Council to consider the "grave and ongoing Israeli violations of international law, including international humanitarian law, and to take the necessary measures in this regard" (letter of 9 October 2003 from the Permanent Representative of the Syrian Arab Republic to the United Nations to the President of the Security Council, S/2003/973, 9 October 2003). This letter was accompanied by a draft resolution for consideration by the Council, which condemned as illegal the construction by Israel of a wall in the Occupied Palestinian Territory departing from the Armistice Line of 1949. The Security Council held its 4841st and 4842nd meetings on 14 October 2003 to consider the item entitled "The situation in the Middle East, including the Palestine question". It then had before it another draft resolution proposed on the same day by Guinea, Malaysia, Pakistan and the Syrian Arab Republic, which also condemned the construction of the wall. This latter draft resolution was put to a vote after an open debate and was not adopted owing to the negative vote of a permanent member of the Council (S/PV.4841 and S/PV.4842).

On 15 October 2003, the Chairman of the Arab Group, on behalf of

the States Members of the League of Arab States, requested the resumption of the Tenth Emergency Special Session of the General Assembly to consider the item of "Illegal Israeli actions in Occupied East Jerusalem and the rest of the Occupied Palestinian Territory" (A/ES-10/242); this request was supported by the Non-Aligned Movement (A/ES-10/243) and the Organization of the Islamic Conference Group at the United Nations (A/ES-10/244). The Tenth Emergency Special Session resumed its work on 20 October 2003.

21. On 27 October 2003, the General Assembly adopted resolution ES-10/13, by which it demanded that

> "Israel stop and reverse the construction of the wall in the Occupied Palestinian Territory, including in and around East Jerusalem, which is in departure of the Armistice Line of 1949 and is in contradiction to relevant provisions of international law" (para. 1).

In paragraph 3, the Assembly requested the Secretary-General

> "to report on compliance with the . . . resolution periodically, with the first report on compliance with paragraph 1 [of that resolution] to be submitted within one month . . .".

The Tenth Emergency Special Session was temporarily adjourned and, on 24 November 2003, the report of the Secretary-General prepared pursuant to General Assembly resolution ES-10/13 (hereinafter the "report of the Secretary-General") was issued (A/ES-10/248).

22. Meanwhile, on 19 November 2003, the Security Council adopted resolution 1515 (2003), by which it "*Endorse[d]* the Quartet Performance-based Roadmap to a Permanent Two-State Solution to the Israeli-Palestinian Conflict". The Quartet consists of representatives of the United States of America, the European Union, the Russian Federation and the United Nations. That resolution

> "*Call[ed] on* the parties to fulfil their obligations under the Roadmap in cooperation with the Quartet and to achieve the vision of two States living side by side in peace and security."

Neither the "Roadmap" nor resolution 1515 (2003) contained any specific provision concerning the construction of the wall, which was not discussed by the Security Council in this context.

23. Nineteen days later, on 8 December 2003, the Tenth Emergency Special Session of the General Assembly again resumed its work, following a new request by the Chairman of the Arab Group, on behalf of the States Members of the League of Arab States, and pursuant to resolution ES-10/13 (letter dated 1 December 2003 to the President of the General Assembly from the Chargé d'affaires a.i. of the Permanent Mission

of Kuwait to the United Nations, A/ES-10/249, 2 December 2003). It was during the meeting convened on that day that resolution ES-10/14 requesting the present advisory opinion was adopted.

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24. Having thus recalled the sequence of events that led to the adoption of resolution ES-10/14, the Court will now turn to the questions of jurisdiction that have been raised in the present proceedings. First, Israel has alleged that, given the active engagement of the Security Council with the situation in the Middle East, including the Palestinian question, the General Assembly acted *ultra vires* under the Charter when it requested an advisory opinion on the legal consequences of the construction of the wall in the Occupied Palestinian Territory.

25. The Court has already indicated that the subject of the present request for an advisory opinion falls within the competence of the General Assembly under the Charter (see paragraphs 15-17 above). However, Article 12, paragraph 1, of the Charter provides that:

> "While the Security Council is exercising in respect of any dispute or situation the functions assigned to it in the present Charter, the General Assembly shall not make any recommendation with regard to that dispute or situation unless the Security Council so requests."

A request for an advisory opinion is not in itself a "recommendation" by the General Assembly "with regard to [a] dispute or situation". It has however been argued in this case that the adoption by the General Assembly of resolution ES-10/14 was *ultra vires* as not in accordance with Article 12. The Court thus considers that it is appropriate for it to examine the significance of that Article, having regard to the relevant texts and the practice of the United Nations.

26. Under Article 24 of the Charter the Security Council has "primary responsibility for the maintenance of international peace and security". In that regard it can impose on States "an explicit obligation of compliance if for example it issues an order or command . . . under Chapter VII" and can, to that end, "require enforcement by coercive action" (*Certain Expenses of the United Nations (Article 17, paragraph 2, of the Charter), Advisory Opinion, I.C.J. Reports 1962*, p. 163). However, the Court would emphasize that Article 24 refers to a primary, but not necessarily exclusive, competence. The General Assembly does have the power, *inter alia*, under Article 14 of the Charter, to "recommend measures for the peaceful adjustment" of various situations *(ibid.)*.

> "[T]he only limitation which Article 14 imposes on the General

Assembly is the restriction found in Article 12, namely, that the Assembly should not recommend measures while the Security Council is dealing with the same matter unless the Council requests it to do so." (*I.C.J. Reports 1962*, p. 163.)

27. As regards the practice of the United Nations, both the General Assembly and the Security Council initially interpreted and applied Article 12 to the effect that the Assembly could not make a recommendation on a question concerning the maintenance of international peace and security while the matter remained on the Council's agenda. Thus the Assembly during its fourth session refused to recommend certain measures on the question of Indonesia, on the ground, *inter alia*, that the Council remained seised of the matter (*Official Records of the General Assembly, Fourth Session,* Ad Hoc *Political Committee, Summary Records of Meetings, 27 September-7 December 1949*, 56th Meeting, 3 December 1949, p. 339, para. 118). As for the Council, on a number of occasions it deleted items from its agenda in order to enable the Assembly to deliberate on them (for example, in respect of the Spanish question (*Official Records of the Security Council, First Year: Second Series, No. 21*, 79th Meeting, 4 November 1946, p. 498), in connection with incidents on the Greek border (*Official Records of the Security Council, Second Year, No. 89*, 202nd Meeting, 15 September 1947, pp. 2404-2405) and in regard to the Island of Taiwan (Formosa) (*Official Records of the Security Council, Fifth Year, No. 48*, 506th Meeting, 29 September 1950, p. 5)). In the case of the Republic of Korea, the Council decided on 31 January 1951 to remove the relevant item from the list of matters of which it was seised in order to enable the Assembly to deliberate on the matter (*Official Records of the Security Council, Sixth Year*, S/PV.531, 531st Meeting, 31 January 1951, pp. 11-12, para. 57).

However, this interpretation of Article 12 has evolved subsequently. Thus the General Assembly deemed itself entitled in 1961 to adopt recommendations in the matter of the Congo (resolutions 1955 (XV) and 1600 (XVI)) and in 1963 in respect of the Portuguese colonies (resolution 1913 (XVIII)) while those cases still appeared on the Council's agenda, without the Council having adopted any recent resolution concerning them. In response to a question posed by Peru during the twenty-third session of the General Assembly, the Legal Counsel of the United Nations confirmed that the Assembly interpreted the words "is exercising the functions" in Article 12 of the Charter as meaning "is exercising the functions at this moment" (General Assembly, Twenty-third Session, Third Committee, 1637th meeting, A/C.3/SR.1637, para. 9). Indeed, the Court notes that there has been an increasing tendency over time for the General Assembly and the Security Council to deal in parallel with the same matter concerning the maintenance of international peace and security (see, for example, the matters involving Cyprus, South Africa, Angola, Southern Rhodesia and more recently Bosnia and Herzegovina and

Somalia). It is often the case that, while the Security Council has tended to focus on the aspects of such matters related to international peace and security, the General Assembly has taken a broader view, considering also their humanitarian, social and economic aspects.

28. The Court considers that the accepted practice of the General Assembly, as it has evolved, is consistent with Article 12, paragraph 1, of the Charter.

The Court is accordingly of the view that the General Assembly, in adopting resolution ES-10/14, seeking an advisory opinion from the Court, did not contravene the provisions of Article 12, paragraph 1, of the Charter. The Court concludes that by submitting that request the General Assembly did not exceed its competence.

29. It has however been contended before the Court that the present request for an advisory opinion did not fulfil the essential conditions set by resolution 377 A (V), under which the Tenth Emergency Special Session was convened and has continued to act. In this regard, it has been said, first, that "The Security Council was never seised of a draft resolution proposing that the Council itself should request an advisory opinion from the Court on the matters now in contention", and, that specific issue having thus never been brought before the Council, the General Assembly could not rely on any inaction by the Council to make such a request. Secondly, it has been claimed that, in adopting resolution 1515 (2003), which endorsed the "Roadmap", before the adoption by the General Assembly of resolution ES-10/14, the Security Council continued to exercise its responsibility for the maintenance of international peace and security and that, as a result, the General Assembly was not entitled to act in its place. The validity of the procedure followed by the Tenth Emergency Special Session, especially the Session's "rolling character" and the fact that its meeting was convened to deliberate on the request for the advisory opinion at the same time as the General Assembly was meeting in regular session, has also been questioned.

30. The Court would recall that resolution 377 A (V) states that:

> "if the Security Council, because of lack of unanimity of the permanent members, fails to exercise its primary responsibility for the maintenance of international peace and security in any case where there appears to be a threat to the peace, breach of the peace, or act of aggression, the General Assembly shall consider the matter immediately with a view to making appropriate recommendations to Members for collective measures . . .".

The procedure provided for by that resolution is premised on two conditions, namely that the Council has failed to exercise its primary responsibility for the maintenance of international peace and security as a result of a negative vote of one or more permanent members, and that the situa-

tion is one in which there appears to be a threat to the peace, breach of the peace, or act of aggression. The Court must accordingly ascertain whether these conditions were fulfilled as regards the convening of the Tenth Emergency Special Session of the General Assembly, in particular at the time when the Assembly decided to request an advisory opinion from the Court.

31. In the light of the sequence of events described in paragraphs 18 to 23 above, the Court observes that, at the time when the Tenth Emergency Special Session was convened in 1997, the Council had been unable to take a decision on the case of certain Israeli settlements in the Occupied Palestinian Territory, due to negative votes of a permanent member; and that, as indicated in resolution ES-10/2 (see paragraph 19 above), there existed a threat to international peace and security.

The Court further notes that, on 20 October 2003, the Tenth Emergency Special Session of the General Assembly was reconvened on the same basis as in 1997 (see the statements by the representatives of Palestine and Israel, A/ES-10/PV.21, pp. 2 and 5), after the rejection by the Security Council, on 14 October 2003, again as a result of the negative vote of a permanent member, of a draft resolution concerning the construction by Israel of the wall in the Occupied Palestinian Territory. The Court considers that the Security Council again failed to act as contemplated in resolution 377 A (V). It does not appear to the Court that the situation in this regard changed between 20 October 2003 and 8 December 2003, since the Council neither discussed the construction of the wall nor adopted any resolution in that connection. Thus, the Court is of the view that, up to 8 December 2003, the Council had not reconsidered the negative vote of 14 October 2003. It follows that, during that period, the Tenth Emergency Special Session was duly reconvened and could properly be seised, under resolution 377 A (V), of the matter now before the Court.

32. The Court would also emphasize that, in the course of this Emergency Special Session, the General Assembly could adopt any resolution falling within the subject-matter for which the Session had been convened, and otherwise within its powers, including a resolution seeking the Court's opinion. It is irrelevant in that regard that no proposal had been made to the Security Council to request such an opinion.

33. Turning now to alleged further procedural irregularities of the Tenth Emergency Special Session, the Court does not consider that the "rolling" character of that Session, namely the fact of its having been convened in April 1997 and reconvened 11 times since then, has any relevance with regard to the validity of the request by the General Assembly. The Court observes in that regard that the Seventh Emergency Special Session of the General Assembly, having been convened on 22 July 1980, was subsequently reconvened four times (on 20 April 1982, 25 June 1982, 16 August 1982 and 24 September 1982), and that the validity of

resolutions or decisions of the Assembly adopted under such circumstances was never disputed. Nor has the validity of any previous resolutions adopted during the Tenth Emergency Special Session been challenged.

34. The Court also notes the contention by Israel that it was improper to reconvene the Tenth Emergency Special Session at a time when the regular session of the General Assembly was in progress. The Court considers that, while it may not have been originally contemplated that it would be appropriate for the General Assembly to hold simultaneous emergency and regular sessions, no rule of the Organization has been identified which would be thereby violated, so as to render invalid the resolution adopting the present request for an advisory opinion.

35. Finally, the Tenth Emergency Special Session appears to have been convened in accordance with Rule 9 *(b)* of the Rules of Procedure of the General Assembly, and the relevant meetings have been convened in pursuance of the applicable rules. As the Court stated in its Advisory Opinion of 21 June 1971 concerning the *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)*, a

> "resolution of a properly constituted organ of the United Nations which is passed in accordance with that organ's rules of procedure, and is declared by its President to have been so passed, must be presumed to have been validly adopted" (*I.C.J. Reports 1971*, p. 22, para. 20).

In view of the foregoing, the Court cannot see any reason why that presumption is to be rebutted in the present case.

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36. The Court now turns to a further issue related to jurisdiction in the present proceedings, namely the contention that the request for an advisory opinion by the General Assembly is not on a "legal question" within the meaning of Article 96, paragraph 1, of the Charter and Article 65, paragraph 1, of the Statute of the Court. It has been contended in this regard that, for a question to constitute a "legal question" for the purposes of these two provisions, it must be reasonably specific, since otherwise it would not be amenable to a response by the Court. With regard to the request made in the present advisory proceedings, it has been argued that it is not possible to determine with reasonable certainty the legal meaning of the question asked of the Court for two reasons.

First, it has been argued that the question regarding the "legal consequences" of the construction of the wall only allows for two possible interpretations, each of which would lead to a course of action that is

precluded for the Court. The question asked could first be interpreted as a request for the Court to find that the construction of the wall is illegal, and then to give its opinion on the legal consequences of that illegality. In this case, it has been contended, the Court should decline to respond to the question asked for a variety of reasons, some of which pertain to jurisdiction and others rather to the issue of propriety. As regards jurisdiction, it is said that, if the General Assembly had wished to obtain the view of the Court on the highly complex and sensitive question of the legality of the construction of the wall, it should have expressly sought an opinion to that effect (cf. *Exchange of Greek and Turkish Populations, Advisory Opinion, 1925, P.C.I.J., Series B, No. 10*, p. 17). A second possible interpretation of the request, it is said, is that the Court should assume that the construction of the wall is illegal, and then give its opinion on the legal consequences of that assumed illegality. It has been contended that the Court should also decline to respond to the question on this hypothesis, since the request would then be based on a questionable assumption and since, in any event, it would be impossible to rule on the legal consequences of illegality without specifying the nature of that illegality.

Secondly, it has been contended that the question asked of the Court is not of a "legal" character because of its imprecision and abstract nature. In particular, it has been argued in this regard that the question fails to specify whether the Court is being asked to address legal consequences for "the General Assembly or some other organ of the United Nations", "Member States of the United Nations", "Israel", "Palestine" or "some combination of the above, or some different entity".

37. As regards the alleged lack of clarity of the terms of the General Assembly's request and its effect on the "legal nature" of the question referred to the Court, the Court observes that this question is directed to the legal consequences arising from a given factual situation considering the rules and principles of international law, including the Geneva Convention relative to the Protection of Civilian Persons in Time of War of 12 August 1949 (hereinafter the "Fourth Geneva Convention") and relevant Security Council and General Assembly resolutions. The question submitted by the General Assembly has thus, to use the Court's phrase in its Advisory Opinion on *Western Sahara*, "been framed in terms of law and raise[s] problems of international law"; it is by its very nature susceptible of a reply based on law; indeed it is scarcely susceptible of a reply otherwise than on the basis of law. In the view of the Court, it is indeed a question of a legal character (see *Western Sahara, Advisory Opinion, I.C.J. Reports 1975*, p. 18, para. 15).

38. The Court would point out that lack of clarity in the drafting of a question does not deprive the Court of jurisdiction. Rather, such uncer-

tainty will require clarification in interpretation, and such necessary clarifications of interpretation have frequently been given by the Court.

In the past, both the Permanent Court and the present Court have observed in some cases that the wording of a request for an advisory opinion did not accurately state the question on which the Court's opinion was being sought (*Interpretation of the Greco-Turkish Agreement of 1 December 1926 (Final Protocol, Article IV), Advisory Opinion, 1928, P.C.I.J., Series B, No. 16 (I)*, pp. 14-16), or did not correspond to the "true legal question" under consideration (*Interpretation of the Agreement of 25 March 1951 between the WHO and Egypt, Advisory Opinion, I.C.J. Reports 1980*, pp. 87-89, paras. 34-36). The Court noted in one case that "the question put to the Court is, on the face of it, at once infelicitously expressed and vague" (*Application for Review of Judgement No. 273 of the United Nations Administrative Tribunal, Advisory Opinion, I.C.J. Reports 1982*, p. 348, para. 46).

Consequently, the Court has often been required to broaden, interpret and even reformulate the questions put (see the three Opinions cited above; see also *Jaworzina, Advisory Opinion, 1923, P.C.I.J., Series B, No. 8*; *Admissibility of Hearings of Petitioners by the Committee on South West Africa, Advisory Opinion, I.C.J. Reports 1956*, p. 25; *Certain Expenses of the United Nations (Article 17, paragraph 2, of the Charter), Advisory Opinion, I.C.J. Reports 1962*, pp. 157-162).

In the present instance, the Court will only have to do what it has often done in the past, namely "identify the existing principles and rules, interpret them and apply them . . ., thus offering a reply to the question posed based on law" (*Legality of the Threat or Use of Nuclear Weapons, I.C.J. Reports 1996 (I)*, p. 234, para. 13).

39. In the present instance, if the General Assembly requests the Court to state the "legal consequences" arising from the construction of the wall, the use of these terms necessarily encompasses an assessment of whether that construction is or is not in breach of certain rules and principles of international law. Thus, the Court is first called upon to determine whether such rules and principles have been and are still being breached by the construction of the wall along the planned route.

40. The Court does not consider that what is contended to be the abstract nature of the question posed to it raises an issue of jurisdiction. Even when the matter was raised as an issue of propriety rather than one of jurisdiction, in the case concerning the *Legality of the Threat or Use of Nuclear Weapons*, the Court took the position that to contend that it should not deal with a question couched in abstract terms is "a mere affirmation devoid of any justification" and that "the Court may give an advisory opinion on any legal question, abstract or otherwise" (*I.C.J. Reports 1996 (I)*, p. 236, para. 15, referring to *Conditions of Admission of a State to Membership in the United Nations (Article 4 of the Charter), Advisory Opinion, 1948, I.C.J. Reports 1947-1948*, p. 61; *Effect of Awards of Compensation Made by the United Nations Administrative Tribunal, Advisory Opinion, I.C.J. Reports 1954*, p. 51; and *Legal Con-*

sequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971, p. 27, para. 40). In any event, the Court considers that the question posed to it in relation to the legal consequences of the construction of the wall is not an abstract one, and moreover that it would be for the Court to determine for whom any such consequences arise.

41. Furthermore, the Court cannot accept the view, which has also been advanced in the present proceedings, that it has no jurisdiction because of the "political" character of the question posed. As is clear from its long-standing jurisprudence on this point, the Court considers that the fact that a legal question also has political aspects,

> "as, in the nature of things, is the case with so many questions which arise in international life, does not suffice to deprive it of its character as a 'legal question' and to 'deprive the Court of a competence expressly conferred on it by its Statute' (*Application for Review of Judgement No. 158 of the United Nations Administrative Tribunal, Advisory Opinion, I.C.J. Reports 1973*, p. 172, para. 14). Whatever its political aspects, the Court cannot refuse to admit the legal character of a question which invites it to discharge an essentially judicial task, namely, an assessment of the legality of the possible conduct of States with regard to the obligations imposed upon them by international law (cf. *Conditions of Admission of a State to Membership in the United Nations (Article 4 of the Charter), Advisory Opinion, 1948, I.C.J. Reports 1947-1948*, pp. 61-62; *Competence of the General Assembly for the Admission of a State to the United Nations, Advisory Opinion, I.C.J. Reports 1950*, pp. 6-7; *Certain Expenses of the United Nations (Article 17, paragraph 2, of the Charter), Advisory Opinion, I.C.J. Reports 1962*, p. 155)." (*Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996 (I)*, p. 234, para. 13.)

In its Opinion concerning the *Interpretation of the Agreement of 25 March 1951 between the WHO and Egypt*, the Court indeed emphasized that,

> "in situations in which political considerations are prominent it may be particularly necessary for an international organization to obtain an advisory opinion from the Court as to the legal principles applicable with respect to the matter under debate . . ." (*I.C.J. Reports 1980*, p. 87, para. 33).

Moreover, the Court has affirmed in its Opinion on the *Legality of the Threat or Use of Nuclear Weapons* that

> "the political nature of the motives which may be said to have inspired the request and the political implications that the opinion given might have are of no relevance in the establishment of its jurisdiction to give such an opinion" (*I.C.J. Reports 1996 (I)*, p. 234, para. 13).

The Court is of the view that there is no element in the present proceedings which could lead it to conclude otherwise.

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42. The Court accordingly has jurisdiction to give the advisory opinion requested by resolution ES-10/14 of the General Assembly.

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43. It has been contended in the present proceedings, however, that the Court should decline to exercise its jurisdiction because of the presence of specific aspects of the General Assembly's request that would render the exercise of the Court's jurisdiction improper and inconsistent with the Court's judicial function.

44. The Court has recalled many times in the past that Article 65, paragraph 1, of its Statute, which provides that "The Court *may* give an advisory opinion . . ." (emphasis added), should be interpreted to mean that the Court has a discretionary power to decline to give an advisory opinion even if the conditions of jurisdiction are met (*Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996 (I)*, pp. 234-235, para. 14). The Court however is mindful of the fact that its answer to a request for an advisory opinion "represents its participation in the activities of the Organization, and, in principle, should not be refused" (*Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, First Phase, Advisory Opinion, I.C.J. Reports 1950*, p. 71; see also, for example, *Difference Relating to Immunity from Legal Process of a Special Rapporteur of the Commission on Human Rights, Advisory Opinion, I.C.J. Reports 1999 (I)*, pp. 78-79, para. 29.) Given its responsibilities as the "principal judicial organ of the United Nations" (Article 92 of the Charter), the Court should in principle not decline to give an advisory opinion. In accordance with its consistent jurisprudence, only "compelling reasons" should lead the Court to refuse its opinion (*Certain Expenses of the United Nations (Article 17, paragraph 2, of the Charter), Advisory Opinion, I.C.J. Reports 1962*, p. 155; see also, for example, *Difference Relating to Immunity from Legal Process of a Special Rapporteur of the Commission on Human Rights, Advisory Opinion, I.C.J. Reports 1999 (I)*, pp. 78-79, para. 29.)

The present Court has never, in the exercise of this discretionary power, declined to respond to a request for an advisory opinion. Its decision not to give the advisory opinion on the *Legality of the Use by a State of Nuclear Weapons in Armed Conflict* requested by the World Health Organization was based on the Court's lack of jurisdiction, and not on considerations of judicial propriety (see *I.C.J. Reports 1996 (I)*, p. 235, para. 14). Only on one occasion did the Court's predecessor, the Permanent Court of International Justice, take the view that it should

not reply to a question put to it (*Status of Eastern Carelia, Advisory Opinion, 1923, P.C.I.J., Series B, No. 5*), but this was due to

> "the very particular circumstances of the case, among which were that the question directly concerned an already existing dispute, one of the States parties to which was neither a party to the Statute of the Permanent Court nor a Member of the League of Nations, objected to the proceedings, and refused to take part in any way" (*Legality of the Threat or Use of Nuclear Weapons, I.C.J. Reports 1996 (I)*, pp. 235-236, para. 14).

45. These considerations do not release the Court from the duty to satisfy itself, each time it is seised of a request for an opinion, as to the propriety of the exercise of its judicial function, by reference to the criterion of "compelling reasons" as cited above. The Court will accordingly examine in detail and in the light of its jurisprudence each of the arguments presented to it in this regard.

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46. The first such argument is to the effect that the Court should not exercise its jurisdiction in the present case because the request concerns a contentious matter between Israel and Palestine, in respect of which Israel has not consented to the exercise of that jurisdiction. According to this view, the subject-matter of the question posed by the General Assembly "is an integral part of the wider Israeli-Palestinian dispute concerning questions of terrorism, security, borders, settlements, Jerusalem and other related matters". Israel has emphasized that it has never consented to the settlement of this wider dispute by the Court or by any other means of compulsory adjudication; on the contrary, it contends that the parties repeatedly agreed that these issues are to be settled by negotiation, with the possibility of an agreement that recourse could be had to arbitration. It is accordingly contended that the Court should decline to give the present Opinion, on the basis *inter alia* of the precedent of the decision of the Permanent Court of International Justice on the *Status of Eastern Carelia.*

47. The Court observes that the lack of consent to the Court's contentious jurisdiction by interested States has no bearing on the Court's jurisdiction to give an advisory opinion. In an Advisory Opinion of 1950, the Court explained that:

> "The consent of States, parties to a dispute, is the basis of the Court's jurisdiction in contentious cases. The situation is different in regard to advisory proceedings even where the Request for an Opinion relates to a legal question actually pending between States. The Court's reply is only of an advisory character: as such, it has no binding force. It follows that no State, whether a Member of the

> United Nations or not, can prevent the giving of an Advisory Opinion which the United Nations considers to be desirable in order to obtain enlightenment as to the course of action it should take. The Court's Opinion is given not to the States, but to the organ which is entitled to request it; the reply of the Court, itself an 'organ of the United Nations', represents its participation in the activities of the Organization, and, in principle, should not be refused." (*Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, First Phase, Advisory Opinion, I.C.J. Reports 1950*, p. 71; see also *Western Sahara, I.C.J. Reports 1975*, p. 24, para. 31.)

It followed from this that, in those proceedings, the Court did not refuse to respond to the request for an advisory opinion on the ground that, in the particular circumstances, it lacked jurisdiction. The Court did however examine the opposition of certain interested States to the request by the General Assembly in the context of issues of judicial propriety. Commenting on its 1950 decision, the Court explained in its Advisory Opinion on *Western Sahara* that it had "Thus . . . recognized that lack of consent might constitute a ground for declining to give the opinion requested if, in the circumstances of a given case, considerations of judicial propriety should oblige the Court to refuse an opinion." The Court continued:

> "In certain circumstances . . . the lack of consent of an interested State may render the giving of an advisory opinion incompatible with the Court's judicial character. An instance of this would be when the circumstances disclose that to give a reply would have the effect of circumventing the principle that a State is not obliged to allow its disputes to be submitted to judicial settlement without its consent." (*Western Sahara, I.C.J. Reports 1975*, p. 25, paras. 32-33.)

In applying that principle to the request concerning *Western Sahara*, the Court found that a legal controversy did indeed exist, but one which had arisen during the proceedings of the General Assembly and in relation to matters with which the Assembly was dealing. It had not arisen independently in bilateral relations (*ibid.*, p. 25, para. 34).

48. As regards the request for an advisory opinion now before it, the Court acknowledges that Israel and Palestine have expressed radically divergent views on the legal consequences of Israel's construction of the wall, on which the Court has been asked to pronounce. However, as the Court has itself noted, "Differences of views . . . on legal issues have existed in practically every advisory proceeding" (*Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971*, p. 24, para. 34).

49. Furthermore, the Court does not consider that the subject-matter

of the General Assembly's request can be regarded as only a bilateral matter between Israel and Palestine. Given the powers and responsibilities of the United Nations in questions relating to international peace and security, it is the Court's view that the construction of the wall must be deemed to be directly of concern to the United Nations. The responsibility of the United Nations in this matter also has its origin in the Mandate and the Partition Resolution concerning Palestine (see paragraphs 70 and 71 below). This responsibility has been described by the General Assembly as "a permanent responsibility towards the question of Palestine until the question is resolved in all its aspects in a satisfactory manner in accordance with international legitimacy" (General Assembly resolution 57/107 of 3 December 2002). Within the institutional framework of the Organization, this responsibility has been manifested by the adoption of many Security Council and General Assembly resolutions, and by the creation of several subsidiary bodies specifically established to assist in the realization of the inalienable rights of the Palestinian people.

50. The object of the request before the Court is to obtain from the Court an opinion which the General Assembly deems of assistance to it for the proper exercise of its functions. The opinion is requested on a question which is of particularly acute concern to the United Nations, and one which is located in a much broader frame of reference than a bilateral dispute. In the circumstances, the Court does not consider that to give an opinion would have the effect of circumventing the principle of consent to judicial settlement, and the Court accordingly cannot, in the exercise of its discretion, decline to give an opinion on that ground.

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51. The Court now turns to another argument raised in the present proceedings in support of the view that it should decline to exercise its jurisdiction. Some participants have argued that an advisory opinion from the Court on the legality of the wall and the legal consequences of its construction could impede a political, negotiated solution to the Israeli-Palestinian conflict. More particularly, it has been contended that such an opinion could undermine the scheme of the "Roadmap" (see paragraph 22 above), which requires Israel and Palestine to comply with certain obligations in various phases referred to therein. The requested opinion, it has been alleged, could complicate the negotiations envisaged in the "Roadmap", and the Court should therefore exercise its discretion and decline to reply to the question put.

This is a submission of a kind which the Court has already had to consider several times in the past. For instance, in its Advisory Opinion on the *Legality of the Threat or Use of Nuclear Weapons*, the Court stated:

> "It has . . . been submitted that a reply from the Court in this case might adversely affect disarmament negotiations and would, therefore, be contrary to the interest of the United Nations. The Court is aware that, no matter what might be its conclusions in any opinion it might give, they would have relevance for the continuing debate on the matter in the General Assembly and would present an additional element in the negotiations on the matter. Beyond that, the effect of the opinion is a matter of appreciation. The Court has heard contrary positions advanced and there are no evident criteria by which it can prefer one assessment to another." *(I.C.J. Reports 1996 (I)*, p. 237, para. 17; see also *Western Sahara, I.C.J. Reports 1975*, p. 37, para. 73.)

52. One participant in the present proceedings has indicated that the Court, if it were to give a response to the request, should in any event do so keeping in mind

> "two key aspects of the peace process: the fundamental principle that permanent status issues must be resolved through negotiations; and the need during the interim period for the parties to fulfil their security responsibilities so that the peace process can succeed".

53. The Court is conscious that the "Roadmap", which was endorsed by the Security Council in resolution 1515 (2003) (see paragraph 22 above), constitutes a negotiating framework for the resolution of the Israeli-Palestinian conflict. It is not clear, however, what influence the Court's opinion might have on those negotiations: participants in the present proceedings have expressed differing views in this regard. The Court cannot regard this factor as a compelling reason to decline to exercise its jurisdiction.

54. It was also put to the Court by certain participants that the question of the construction of the wall was only one aspect of the Israeli-Palestinian conflict, which could not be properly addressed in the present proceedings. The Court does not however consider this a reason for it to decline to reply to the question asked. The Court is indeed aware that the question of the wall is part of a greater whole, and it would take this circumstance carefully into account in any opinion it might give. At the same time, the question that the General Assembly has chosen to ask of the Court is confined to the legal consequences of the construction of the wall, and the Court would only examine other issues to the extent that they might be necessary to its consideration of the question put to it.

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55. Several participants in the proceedings have raised the further

argument that the Court should decline to exercise its jurisdiction because it does not have at its disposal the requisite facts and evidence to enable it to reach its conclusions. In particular, Israel has contended, referring to the Advisory Opinion on the *Interpretation of Peace Treaties with Bulgaria, Hungary and Romania*, that the Court could not give an opinion on issues which raise questions of fact that cannot be elucidated without hearing all parties to the conflict. According to Israel, if the Court decided to give the requested opinion, it would be forced to speculate about essential facts and make assumptions about arguments of law. More specifically, Israel has argued that the Court could not rule on the legal consequences of the construction of the wall without enquiring, first, into the nature and scope of the security threat to which the wall is intended to respond and the effectiveness of that response, and, second, into the impact of the construction for the Palestinians. This task, which would already be difficult in a contentious case, would be further complicated in an advisory proceeding, particularly since Israel alone possesses much of the necessary information and has stated that it chooses not to address the merits. Israel has concluded that the Court, confronted with factual issues impossible to clarify in the present proceedings, should use its discretion and decline to comply with the request for an advisory opinion.

56. The Court observes that the question whether the evidence available to it is sufficient to give an advisory opinion must be decided in each particular instance. In its Opinion concerning the *Interpretation of Peace Treaties with Bulgaria, Hungary and Romania* (*I.C.J. Reports 1950*, p. 72) and again in its Opinion on the *Western Sahara*, the Court made it clear that what is decisive in these circumstances is

> "whether the Court has before it sufficient information and evidence to enable it to arrive at a judicial conclusion upon any disputed questions of fact the determination of which is necessary for it to give an opinion in conditions compatible with its judicial character" (*Western Sahara, I.C.J. Reports 1975*, pp. 28-29, para. 46).

Thus, for instance, in the proceedings concerning the *Status of Eastern Carelia*, the Permanent Court of International Justice decided to decline to give an Opinion *inter alia* because the question put "raised a question of fact which could not be elucidated without hearing both parties" (*Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, I.C.J. Reports 1950*, p. 72; see *Status of Eastern Carelia, P.C.I.J., Series B, No. 5*, p. 28). On the other hand, in the *Western Sahara* Opinion, the Court observed that it had been provided with very extensive documentary evidence of the relevant facts (*I.C.J. Reports 1975*, p. 29, para. 47).

57. In the present instance, the Court has at its disposal the report of the Secretary-General, as well as a voluminous dossier submitted by him to the Court, comprising not only detailed information on the route of

the wall but also on its humanitarian and socio-economic impact on the Palestinian population. The dossier includes several reports based on on-site visits by special rapporteurs and competent organs of the United Nations. The Secretary-General has further submitted to the Court a written statement updating his report, which supplemented the information contained therein. Moreover, numerous other participants have submitted to the Court written statements which contain information relevant to a response to the question put by the General Assembly. The Court notes in particular that Israel's Written Statement, although limited to issues of jurisdiction and judicial propriety, contained observations on other matters, including Israel's concerns in terms of security, and was accompanied by corresponding annexes; many other documents issued by the Israeli Government on those matters are in the public domain.

58. The Court finds that it has before it sufficient information and evidence to enable it to give the advisory opinion requested by the General Assembly. Moreover, the circumstance that others may evaluate and interpret these facts in a subjective or political manner can be no argument for a court of law to abdicate its judicial task. There is therefore in the present case no lack of information such as to constitute a compelling reason for the Court to decline to give the requested opinion.

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59. In their written statements, some participants have also put forward the argument that the Court should decline to give the requested opinion on the legal consequences of the construction of the wall because such opinion would lack any useful purpose. They have argued that the advisory opinions of the Court are to be seen as a means to enable an organ or agency in need of legal clarification for its future action to obtain that clarification. In the present instance, the argument continues, the General Assembly would not need an opinion of the Court because it has already declared the construction of the wall to be illegal and has already determined the legal consequences by demanding that Israel stop and reverse its construction, and further, because the General Assembly has never made it clear how it intended to use the opinion.

60. As is clear from the Court's jurisprudence, advisory opinions have the purpose of furnishing to the requesting organs the elements of law necessary for them in their action. In its Opinion concerning *Reservations to the Convention on the Prevention and Punishment of the Crime of Genocide*, the Court observed: "The object of this request for an Opinion is to guide the United Nations in respect of its own action." (*I.C.J. Reports 1951*, p. 19.) Likewise, in its Opinion on the *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South*

West Africa) notwithstanding Security Council Resolution 276 (1970), the Court noted: "The request is put forward by a United Nations organ with reference to its own decisions and it seeks legal advice from the Court on the consequences and implications of these decisions." (*I.C.J. Reports 1971*, p. 24, para. 32.) The Court found on another occasion that the advisory opinion it was to give would "furnish the General Assembly with elements of a legal character relevant to its further treatment of the decolonization of Western Sahara" (*Western Sahara, I.C.J. Reports 1975*, p. 37, para. 72).

61. With regard to the argument that the General Assembly has not made it clear what use it would make of an advisory opinion on the wall, the Court would recall, as equally relevant in the present proceedings, what it stated in its Opinion on the *Legality of the Threat or Use of Nuclear Weapons*:

> "Certain States have observed that the General Assembly has not explained to the Court for what precise purposes it seeks the advisory opinion. Nevertheless, it is not for the Court itself to purport to decide whether or not an advisory opinion is needed by the Assembly for the performance of its functions. The General Assembly has the right to decide for itself on the usefulness of an opinion in the light of its own needs." (*I.C.J. Reports 1996 (I)*, p. 237, para. 16.)

62. It follows that the Court cannot decline to answer the question posed based on the ground that its opinion would lack any useful purpose. The Court cannot substitute its assessment of the usefulness of the opinion requested for that of the organ that seeks such opinion, namely the General Assembly. Furthermore, and in any event, the Court considers that the General Assembly has not yet determined all the possible consequences of its own resolution. The Court's task would be to determine in a comprehensive manner the legal consequences of the construction of the wall, while the General Assembly — and the Security Council — may then draw conclusions from the Court's findings.

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63. Lastly, the Court will turn to another argument advanced with regard to the propriety of its giving an advisory opinion in the present proceedings. Israel has contended that Palestine, given its responsibility for acts of violence against Israel and its population which the wall is aimed at addressing, cannot seek from the Court a remedy for a situation resulting from its own wrongdoing. In this context, Israel has invoked the maxim *nullus commodum capere potest de sua injuria propria*, which it considers to be as relevant in advisory proceedings as it is in contentious cases. Therefore, Israel concludes, good faith and the principle of "clean hands" provide a compelling reason that should lead the Court to refuse the General Assembly's request.

64. The Court does not consider this argument to be pertinent. As was emphasized earlier, it was the General Assembly which requested the advisory opinion, and the opinion is to be given to the General Assembly, and not to a specific State or entity.

* *

65. In the light of the foregoing, the Court concludes not only that it has jurisdiction to give an opinion on the question put to it by the General Assembly (see paragraph 42 above), but also that there is no compelling reason for it to use its discretionary power not to give that opinion.

* * *

66. The Court will now address the question put to it by the General Assembly in resolution ES-10/14. The Court recalls that the question is as follows:

> "What are the legal consequences arising from the construction of the wall being built by Israel, the occupying Power, in the Occupied Palestinian Territory, including in and around East Jerusalem, as described in the report of the Secretary-General, considering the rules and principles of international law, including the Fourth Geneva Convention of 1949, and relevant Security Council and General Assembly resolutions?"

67. As explained in paragraph 82 below, the "wall" in question is a complex construction, so that that term cannot be understood in a limited physical sense. However, the other terms used, either by Israel ("fence") or by the Secretary-General ("barrier"), are no more accurate if understood in the physical sense. In this Opinion, the Court has therefore chosen to use the terminology employed by the General Assembly.

The Court notes furthermore that the request of the General Assembly concerns the legal consequences of the wall being built "in the Occupied Palestinian Territory, including in and around East Jerusalem". As also explained below (see paragraphs 79-84 below), some parts of the complex are being built, or are planned to be built, on the territory of Israel itself; the Court does not consider that it is called upon to examine the legal consequences arising from the construction of those parts of the wall.

68. The question put by the General Assembly concerns the legal consequences of the construction of the wall in the Occupied Palestinian Territory. However, in order to indicate those consequences to the General Assembly the Court must first determine whether or not the construction of that wall breaches international law (see paragraph 39 above). It will

therefore make this determination before dealing with the consequences of the construction.

69. To do so, the Court will first make a brief analysis of the status of the territory concerned, and will then describe the works already constructed or in course of construction in that territory. It will then indicate the applicable law before seeking to establish whether that law has been breached.

* *

70. Palestine was part of the Ottoman Empire. At the end of the First World War, a class "A" Mandate for Palestine was entrusted to Great Britain by the League of Nations, pursuant to paragraph 4 of Article 22 of the Covenant, which provided that:

> "Certain communities, formerly belonging to the Turkish Empire have reached a stage of development where their existence as independent nations can be provisionally recognized subject to the rendering of administrative advice and assistance by a Mandatory until such time as they are able to stand alone."

The Court recalls that in its Advisory Opinion on the *International Status of South West Africa*, speaking of mandates in general, it observed that "The Mandate was created, in the interest of the inhabitants of the territory, and of humanity in general, as an international institution with an international object — a sacred trust of civilization." (*I.C.J. Reports 1950*, p. 132.) The Court also held in this regard that "two principles were considered to be of paramount importance: the principle of non-annexation and the principle that the well-being and development of . . . peoples [not yet able to govern themselves] form[ed] 'a sacred trust of civilization' " (*ibid.*, p. 131).

The territorial boundaries of the Mandate for Palestine were laid down by various instruments, in particular on the eastern border by a British memorandum of 16 September 1922 and an Anglo-Transjordanian Treaty of 20 February 1928.

71. In 1947 the United Kingdom announced its intention to complete evacuation of the mandated territory by 1 August 1948, subsequently advancing that date to 15 May 1948. In the meantime, the General Assembly had on 29 November 1947 adopted resolution 181 (II) on the future government of Palestine, which "*Recommends* to the United Kingdom . . . and to all other Members of the United Nations the adoption and implementation . . . of the Plan of Partition" of the territory, as set forth in the resolution, between two independent States, one Arab, the other Jewish, as well as the creation of a special international régime for the City of Jerusalem. The Arab population of Palestine and the Arab States rejected this plan, contending that it was unbalanced; on 14 May

1948, Israel proclaimed its independence on the strength of the General Assembly resolution; armed conflict then broke out between Israel and a number of Arab States and the Plan of Partition was not implemented.

72. By resolution 62 (1948) of 16 November 1948, the Security Council decided that "an armistice shall be established in all sectors of Palestine" and called upon the parties directly involved in the conflict to seek agreement to this end. In conformity with this decision, general armistice agreements were concluded in 1949 between Israel and the neighbouring States through mediation by the United Nations. In particular, one such agreement was signed in Rhodes on 3 April 1949 between Israel and Jordan. Articles V and VI of that Agreement fixed the armistice demarcation line between Israeli and Arab forces (often later called the "Green Line" owing to the colour used for it on maps; hereinafter the "Green Line"). Article III, paragraph 2, provided that "No element of the . . . military or para-military forces of either Party . . . shall advance beyond or pass over for any purpose whatsoever the Armistice Demarcation Lines . . ." It was agreed in Article VI, paragraph 8, that these provisions would not be "interpreted as prejudicing, in any sense, an ultimate political settlement between the Parties". It was also stated that "the Armistice Demarcation Lines defined in articles V and VI of [the] Agreement [were] agreed upon by the Parties without prejudice to future territorial settlements or boundary lines or to claims of either Party relating thereto". The Demarcation Line was subject to such rectification as might be agreed upon by the parties.

73. In the 1967 armed conflict, Israeli forces occupied all the territories which had constituted Palestine under British Mandate (including those known as the West Bank, lying to the east of the Green Line).

74. On 22 November 1967, the Security Council unanimously adopted resolution 242 (1967), which emphasized the inadmissibility of acquisition of territory by war and called for the "Withdrawal of Israel armed forces from territories occupied in the recent conflict", and "Termination of all claims or states of belligerency".

75. From 1967 onwards, Israel took a number of measures in these territories aimed at changing the status of the City of Jerusalem. The Security Council, after recalling on a number of occasions "the principle that acquisition of territory by military conquest is inadmissible", condemned those measures and, by resolution 298 (1971) of 25 September 1971, confirmed in the clearest possible terms that:

> "all legislative and administrative actions taken by Israel to change the status of the City of Jerusalem, including expropriation of land and properties, transfer of populations and legislation aimed at the incorporation of the occupied section, are totally invalid and cannot change that status".

Later, following the adoption by Israel on 30 July 1980 of the Basic Law making Jerusalem the "complete and united" capital of Israel, the Security Council, by resolution 478 (1980) of 20 August 1980, stated that the enactment of that Law constituted a violation of international law and that "all legislative and administrative measures and actions taken by Israel, the occupying Power, which have altered or purport to alter the character and status of the Holy City of Jerusalem . . . are null and void". It further decided "not to recognize the 'basic law' and such other actions by Israel that, as a result of this law, seek to alter the character and status of Jerusalem".

76. Subsequently, a peace treaty was signed on 26 October 1994 between Israel and Jordan. That treaty fixed the boundary between the two States "with reference to the boundary definition under the Mandate as is shown in Annex I *(a)* . . . without prejudice to the status of any territories that came under Israeli military government control in 1967" (Article 3, paragraphs 1 and 2). Annex I provided the corresponding maps and added that, with regard to the "territory that came under Israeli military government control in 1967", the line indicated "is the administrative boundary" with Jordan.

77. Lastly, a number of agreements have been signed since 1993 between Israel and the Palestine Liberation Organization imposing various obligations on each party. Those agreements *inter alia* required Israel to transfer to Palestinian authorities certain powers and responsibilities exercised in the Occupied Palestinian Territory by its military authorities and civil administration. Such transfers have taken place, but, as a result of subsequent events, they remained partial and limited.

78. The Court would observe that, under customary international law as reflected (see paragraph 89 below) in Article 42 of the Regulations Respecting the Laws and Customs of War on Land annexed to the Fourth Hague Convention of 18 October 1907 (hereinafter "the Hague Regulations of 1907"), territory is considered occupied when it is actually placed under the authority of the hostile army, and the occupation extends only to the territory where such authority has been established and can be exercised.

The territories situated between the Green Line (see paragraph 72 above) and the former eastern boundary of Palestine under the Mandate were occupied by Israel in 1967 during the armed conflict between Israel and Jordan. Under customary international law, these were therefore occupied territories in which Israel had the status of occupying Power. Subsequent events in these territories, as described in paragraphs 75 to 77 above, have done nothing to alter this situation. All these territories (including East Jerusalem) remain occupied territories and Israel has continued to have the status of occupying Power.

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79. It is essentially in these territories that Israel has constructed or plans to construct the works described in the report of the Secretary-General. The Court will now describe those works, basing itself on that report. For developments subsequent to the publication of that report, the Court will refer to complementary information contained in the Written Statement of the United Nations, which was intended by the Secretary-General to supplement his report (hereinafter "Written Statement of the Secretary-General").

80. The report of the Secretary-General states that "The Government of Israel has since 1996 considered plans to halt infiltration into Israel from the central and northern West Bank . . ." (para. 4). According to that report, a plan of this type was approved for the first time by the Israeli Cabinet in July 2001. Then, on 14 April 2002, the Cabinet adopted a decision for the construction of works, forming what Israel describes as a "security fence", 80 kilometres in length, in three areas of the West Bank.

The project was taken a stage further when, on 23 June 2002, the Israeli Cabinet approved the first phase of the construction of a "continuous fence" in the West Bank (including East Jerusalem). On 14 August 2002, it adopted the line of that "fence" for the work in Phase A, with a view to the construction of a complex 123 kilometres long in the northern West Bank, running from the Salem checkpoint (north of Jenin) to the settlement at Elkana. Phase B of the work was approved in December 2002. It entailed a stretch of some 40 kilometres running east from the Salem checkpoint towards Beth Shean along the northern part of the Green Line as far as the Jordan Valley. Furthermore, on 1 October 2003, the Israeli Cabinet approved a full route, which, according to the report of the Secretary-General, "will form one continuous line stretching 720 kilometres along the West Bank". A map showing completed and planned sections was posted on the Israeli Ministry of Defence website on 23 October 2003. According to the particulars provided on that map, a continuous section (Phase C) encompassing a number of large settlements will link the north-western end of the "security fence" built around Jerusalem with the southern point of Phase A construction at Elkana. According to the same map, the "security fence" will run for 115 kilometres from the Har Gilo settlement near Jerusalem to the Carmel settlement south-east of Hebron (Phase D). According to Ministry of Defence documents, work in this sector is due for completion in 2005. Lastly, there are references in the case file to Israel's planned construction of a "security fence" following the Jordan Valley along the mountain range to the west.

81. According to the Written Statement of the Secretary-General, the first part of these works (Phase A), which ultimately extends for a distance of 150 kilometres, was declared completed on 31 July 2003. It is reported that approximately 56,000 Palestinians would be encompassed in enclaves. During this phase, two sections totalling 19.5 kilometres

were built around Jerusalem. In November 2003 construction of a new section was begun along the Green Line to the west of the Nazlat Issa-Baqa al-Sharqiya enclave, which in January 2004 was close to completion at the time when the Secretary-General submitted his Written Statement.

According to the Written Statement of the Secretary-General, the works carried out under Phase B were still in progress in January 2004. Thus an initial section of this stretch, which runs near or on the Green Line to the village of al-Mutilla, was almost complete in January 2004. Two additional sections diverge at this point. Construction started in early January 2004 on one section that runs due east as far as the Jordanian border. Construction of the second section, which is planned to run from the Green Line to the village of Taysir, has barely begun. The United Nations has, however, been informed that this second section might not be built.

The Written Statement of the Secretary-General further states that Phase C of the work, which runs from the terminus of Phase A, near the Elkana settlement, to the village of Nu'man, south-east of Jerusalem, began in December 2003. This section is divided into three stages. In Stage C1, between *inter alia* the villages of Rantis and Budrus, approximately 4 kilometres out of a planned total of 40 kilometres have been constructed. Stage C2, which will surround the so-called "Ariel Salient" by cutting 22 kilometres into the West Bank, will incorporate 52,000 Israeli settlers. Stage C3 is to involve the construction of two "depth barriers"; one of these is to run north-south, roughly parallel with the section of Stage C1 currently under construction between Rantis and Budrus, whilst the other runs east-west along a ridge said to be part of the route of Highway 45, a motorway under construction. If construction of the two barriers were completed, two enclaves would be formed, encompassing 72,000 Palestinians in 24 communities.

Further construction also started in late November 2003 along the south-eastern part of the municipal boundary of Jerusalem, following a route that, according to the Written Statement of the Secretary-General, cuts off the suburban village of El-Ezariya from Jerusalem and splits the neighbouring Abu Dis in two.

As at 25 January 2004, according to the Written Statement of the Secretary-General, some 190 kilometres of construction had been completed, covering Phase A and the greater part of Phase B. Further construction in Phase C had begun in certain areas of the central West Bank and in Jerusalem. Phase D, planned for the southern part of the West Bank, had not yet begun.

The Israeli Government has explained that the routes and timetable as described above are subject to modification. In February 2004, for example, an 8-kilometre section near the town of Baqa al-Sharqiya was

demolished, and the planned length of the wall appears to have been slightly reduced.

82. According to the description in the report and the Written Statement of the Secretary-General, the works planned or completed have resulted or will result in a complex consisting essentially of:

(1) a fence with electronic sensors;
(2) a ditch (up to 4 metres deep);
(3) a two-lane asphalt patrol road;
(4) a trace road (a strip of sand smoothed to detect footprints) running parallel to the fence;
(5) a stack of six coils of barbed wire marking the perimeter of the complex.

The complex has a width of 50 to 70 metres, increasing to as much as 100 metres in some places. "Depth barriers" may be added to these works.

The approximately 180 kilometres of the complex completed or under construction as of the time when the Secretary-General submitted his report included some 8.5 kilometres of concrete wall. These are generally found where Palestinian population centres are close to or abut Israel (such as near Qalqiliya and Tulkarm or in parts of Jerusalem).

83. According to the report of the Secretary-General, in its northernmost part, the wall as completed or under construction barely deviates from the Green Line. It nevertheless lies within occupied territories for most of its course. The works deviate more than 7.5 kilometres from the Green Line in certain places to encompass settlements, while encircling Palestinian population areas. A stretch of 1 to 2 kilometres west of Tulkarm appears to run on the Israeli side of the Green Line. Elsewhere, on the other hand, the planned route would deviate eastward by up to 22 kilometres. In the case of Jerusalem, the existing works and the planned route lie well beyond the Green Line and even in some cases beyond the eastern municipal boundary of Jerusalem as fixed by Israel.

84. On the basis of that route, approximately 975 square kilometres (or 16.6 per cent of the West Bank) would, according to the report of the Secretary-General, lie between the Green Line and the wall. This area is stated to be home to 237,000 Palestinians. If the full wall were completed as planned, another 160,000 Palestinians would live in almost completely encircled communities, described as enclaves in the report. As a result of the planned route, nearly 320,000 Israeli settlers (of whom 178,000 in East Jerusalem) would be living in the area between the Green Line and the wall.

85. Lastly, it should be noted that the construction of the wall has been accompanied by the creation of a new administrative régime. Thus in October 2003 the Israeli Defence Forces issued Orders establishing the

part of the West Bank lying between the Green Line and the wall as a "Closed Area". Residents of this area may no longer remain in it, nor may non-residents enter it, unless holding a permit or identity card issued by the Israeli authorities. According to the report of the Secretary-General, most residents have received permits for a limited period. Israeli citizens, Israeli permanent residents and those eligible to immigrate to Israel in accordance with the Law of Return may remain in, or move freely to, from and within the Closed Area without a permit. Access to and exit from the Closed Area can only be made through access gates, which are opened infrequently and for short periods.

* *

86. The Court will now determine the rules and principles of international law which are relevant in assessing the legality of the measures taken by Israel. Such rules and principles can be found in the United Nations Charter and certain other treaties, in customary international law and in the relevant resolutions adopted pursuant to the Charter by the General Assembly and the Security Council. However, doubts have been expressed by Israel as to the applicability in the Occupied Palestinian Territory of certain rules of international humanitarian law and human rights instruments. The Court will now consider these various questions.

87. The Court first recalls that, pursuant to Article 2, paragraph 4, of the United Nations Charter:

> "All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any State, or in any other manner inconsistent with the Purposes of the United Nations."

On 24 October 1970, the General Assembly adopted resolution 2625 (XXV), entitled "Declaration on Principles of International Law concerning Friendly Relations and Co-operation among States" (hereinafter "resolution 2625 (XXV)"), in which it emphasized that "No territorial acquisition resulting from the threat or use of force shall be recognized as legal." As the Court stated in its Judgment in the case concerning *Military and Paramilitary Activities in and against Nicaragua (Nicaragua* v. *United States of America)*, the principles as to the use of force incorporated in the Charter reflect customary international law (see *I.C.J. Reports 1986*, pp. 98-101, paras. 187-190); the same is true of its corollary entailing the illegality of territorial acquisition resulting from the threat or use of force.

88. The Court also notes that the principle of self-determination of peoples has been enshrined in the United Nations Charter and reaffirmed by the General Assembly in resolution 2625 (XXV) cited above, pursuant

to which "Every State has the duty to refrain from any forcible action which deprives peoples referred to [in that resolution] . . . of their right to self-determination." Article 1 common to the International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights reaffirms the right of all peoples to self-determination, and lays upon the States parties the obligation to promote the realization of that right and to respect it, in conformity with the provisions of the United Nations Charter.

The Court would recall that in 1971 it emphasized that current developments in "international law in regard to non-self-governing territories, as enshrined in the Charter of the United Nations, made the principle of self-determination applicable to all [such territories]". The Court went on to state that "These developments leave little doubt that the ultimate objective of the sacred trust" referred to in Article 22, paragraph 1, of the Covenant of the League of Nations "was the self-determination . . . of the peoples concerned" (*Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971*, p. 31, paras. 52-53). The Court has referred to this principle on a number of occasions in its jurisprudence (*ibid.*; see also *Western Sahara, Advisory Opinion, I.C.J. Reports 1975*, p. 68, para. 162). The Court indeed made it clear that the right of peoples to self-determination is today a right *erga omnes* (see *East Timor (Portugal* v. *Australia), Judgment, I.C.J. Reports 1995*, p. 102, para. 29).

89. As regards international humanitarian law, the Court would first note that Israel is not a party to the Fourth Hague Convention of 1907, to which the Hague Regulations are annexed. The Court observes that, in the words of the Convention, those Regulations were prepared "to revise the general laws and customs of war" existing at that time. Since then, however, the International Military Tribunal of Nuremberg has found that the "rules laid down in the Convention were recognised by all civilised nations, and were regarded as being declaratory of the laws and customs of war" (Judgment of the International Military Tribunal of Nuremberg, 30 September and 1 October 1946, p. 65). The Court itself reached the same conclusion when examining the rights and duties of belligerents in their conduct of military operations (*Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996 (I)*, p. 256, para. 75). The Court considers that the provisions of the Hague Regulations have become part of customary law, as is in fact recognized by all the participants in the proceedings before the Court.

The Court also observes that, pursuant to Article 154 of the Fourth Geneva Convention, that Convention is supplementary to Sections II and III of the Hague Regulations. Section III of those Regulations, which concerns "Military authority over the territory of the hostile State", is particularly pertinent in the present case.

90. Secondly, with regard to the Fourth Geneva Convention, differing views have been expressed by the participants in these proceedings. Israel, contrary to the great majority of the other participants, disputes the applicability *de jure* of the Convention to the Occupied Palestinian Territory. In particular, in paragraph 3 of Annex I to the report of the Secretary-General, entitled "Summary Legal Position of the Government of Israel", it is stated that Israel does not agree that the Fourth Geneva Convention "is applicable to the occupied Palestinian Territory", citing "the lack of recognition of the territory as sovereign prior to its annexation by Jordan and Egypt" and inferring that it is "not a territory of a High Contracting Party as required by the Convention".

91. The Court would recall that the Fourth Geneva Convention was ratified by Israel on 6 July 1951 and that Israel is a party to that Convention. Jordan has also been a party thereto since 29 May 1951. Neither of the two States has made any reservation that would be pertinent to the present proceedings.

Furthermore, Palestine gave a unilateral undertaking, by declaration of 7 June 1982, to apply the Fourth Geneva Convention. Switzerland, as depositary State, considered that unilateral undertaking valid. It concluded, however, that it "[was] not — as a depositary — in a position to decide whether" "the request [dated 14 June 1989] from the Palestine Liberation Movement in the name of the 'State of Palestine' to accede" *inter alia* to the Fourth Geneva Convention "can be considered as an instrument of accession".

92. Moreover, for the purpose of determining the scope of application of the Fourth Geneva Convention, it should be recalled that under common Article 2 of the four Conventions of 12 August 1949:

> "In addition to the provisions which shall be implemented in peacetime, the present Convention shall apply to all cases of declared war or of any other armed conflict which may arise between two or more of the High Contracting Parties, even if the state of war is not recognized by one of them.
>
> The Convention shall also apply to all cases of partial or total occupation of the territory of a High Contracting Party, even if the said occupation meets with no armed resistance.
>
> Although one of the Powers in conflict may not be a party to the present Convention, the Powers who are parties thereto shall remain bound by it in their mutual relations. They shall furthermore be bound by the Convention in relation to the said Power, if the latter accepts and applies the provisions thereof."

93. After the occupation of the West Bank in 1967, the Israeli authorities issued an order No. 3 stating in its Article 35 that:

> "the Military Court . . . must apply the provisions of the Geneva Convention dated 12 August 1949 relative to the Protection of

> Civilian Persons in Time of War with respect to judicial procedures. In case of conflict between this Order and the said Convention, the Convention shall prevail."

Subsequently, the Israeli authorities have indicated on a number of occasions that in fact they generally apply the humanitarian provisions of the Fourth Geneva Convention within the occupied territories. However, according to Israel's position as briefly recalled in paragraph 90 above, that Convention is not applicable *de jure* within those territories because, under Article 2, paragraph 2, it applies only in the case of occupation of territories falling under the sovereignty of a High Contracting Party involved in an armed conflict. Israel explains that Jordan was admittedly a party to the Fourth Geneva Convention in 1967, and that an armed conflict broke out at that time between Israel and Jordan, but it goes on to observe that the territories occupied by Israel subsequent to that conflict had not previously fallen under Jordanian sovereignty. It infers from this that that Convention is not applicable *de jure* in those territories. According however to the great majority of other participants in the proceedings, the Fourth Geneva Convention is applicable to those territories pursuant to Article 2, paragraph 1, whether or not Jordan had any rights in respect thereof prior to 1967.

94. The Court would recall that, according to customary international law as expressed in Article 31 of the Vienna Convention on the Law of Treaties of 23 May 1969, a treaty must be interpreted in good faith in accordance with the ordinary meaning to be given to its terms in their context and in the light of its object and purpose. Article 32 provides that:

> "Recourse may be had to supplementary means of interpretation, including the preparatory work of the treaty and the circumstances of its conclusion, in order to confirm the meaning resulting from the application of article 31, or to determine the meaning when the interpretation according to article 31 . . . leaves the meaning ambiguous or obscure; or . . . leads to a result which is manifestly obscure or unreasonable." (See *Oil Platforms (Islamic Republic of Iran* v. *United States of America), Preliminary Objection, Judgment, I.C.J. Reports 1996 (II)*, p. 812, para. 23; see, similarly, *Kasikili/Sedudu Island (Botswana/Namibia), Judgment, I.C.J. Reports 1999 (II)*, p. 1059, para. 18, and *Sovereignty over Pulau Ligitan and Pulau Sipadan (Indonesia/Malaysia), Judgment, I.C.J. Reports 2002*, p. 645, para. 37.)

95. The Court notes that, according to the first paragraph of Article 2 of the Fourth Geneva Convention, that Convention is applicable when two conditions are fulfilled: that there exists an armed conflict (whether or not a state of war has been recognized); and that the conflict has arisen between two contracting parties. If those two conditions are satis-

fied, the Convention applies, in particular, in any territory occupied in the course of the conflict by one of the contracting parties.

The object of the second paragraph of Article 2 is not to restrict the scope of application of the Convention, as defined by the first paragraph, by excluding therefrom territories not falling under the sovereignty of one of the contracting parties. It is directed simply to making it clear that, even if occupation effected during the conflict met no armed resistance, the Convention is still applicable.

This interpretation reflects the intention of the drafters of the Fourth Geneva Convention to protect civilians who find themselves, in whatever way, in the hands of the occupying Power. Whilst the drafters of the Hague Regulations of 1907 were as much concerned with protecting the rights of a State whose territory is occupied, as with protecting the inhabitants of that territory, the drafters of the Fourth Geneva Convention sought to guarantee the protection of civilians in time of war, regardless of the status of the occupied territories, as is shown by Article 47 of the Convention.

That interpretation is confirmed by the Convention's *travaux préparatoires*. The Conference of Government Experts convened by the International Committee of the Red Cross (hereinafter, "ICRC") in the aftermath of the Second World War for the purpose of preparing the new Geneva Conventions recommended that these conventions be applicable to any armed conflict "whether [it] is or is not recognized as a state of war by the parties" and "in cases of occupation of territories in the absence of any state of war" (*Report on the Work of the Conference of Government Experts for the Study of the Conventions for the Protection of War Victims, Geneva, 14-26 April 1947*, p. 8). The drafters of the second paragraph of Article 2 thus had no intention, when they inserted that paragraph into the Convention, of restricting the latter's scope of application. They were merely seeking to provide for cases of occupation without combat, such as the occupation of Bohemia and Moravia by Germany in 1939.

96. The Court would moreover note that the States parties to the Fourth Geneva Convention approved that interpretation at their Conference on 15 July 1999. They issued a statement in which they "reaffirmed the applicability of the Fourth Geneva Convention to the Occupied Palestinian Territory, including East Jerusalem". Subsequently, on 5 December 2001, the High Contracting Parties, referring in particular to Article 1 of the Fourth Geneva Convention of 1949, once again reaffirmed the "applicability of the Fourth Geneva Convention to the Occupied Palestinian Territory, including East Jerusalem". They further reminded the Contracting Parties participating in the Conference, the parties to the conflict, and the State of Israel as occupying Power, of their respective obligations.

97. Moreover, the Court would observe that the ICRC, whose special position with respect to execution of the Fourth Geneva Convention must be "recognized and respected at all times" by the parties pursuant

to Article 142 of the Convention, has also expressed its opinion on the interpretation to be given to the Convention. In a declaration of 5 December 2001, it recalled that "the ICRC has always affirmed the *de jure* applicability of the Fourth Geneva Convention to the territories occupied since 1967 by the State of Israel, including East Jerusalem".

98. The Court notes that the General Assembly has, in many of its resolutions, taken a position to the same effect. Thus on 10 December 2001 and 9 December 2003, in resolutions 56/60 and 58/97, it reaffirmed

> "that the Geneva Convention relative to the Protection of Civilian Persons in Time of War, of 12 August 1949, is applicable to the Occupied Palestinian Territory, including East Jerusalem, and other Arab territories occupied by Israel since 1967".

99. The Security Council, for its part, had already on 14 June 1967 taken the view in resolution 237 (1967) that "all the obligations of the Geneva Convention relative to the Treatment of Prisoners of War . . . should be complied with by the parties involved in the conflict". Subsequently, on 15 September 1969, the Security Council, in resolution 271 (1969), called upon "Israel scrupulously to observe the provisions of the Geneva Conventions and international law governing military occupation".

Ten years later, the Security Council examined "the policy and practices of Israel in establishing settlements in the Palestinian and other Arab territories occupied since 1967". In resolution 446 (1979) of 22 March 1979, the Security Council considered that those settlements had "no legal validity" and affirmed "*once more* that the Geneva Convention relative to the Protection of Civilian Persons in Time of War, of 12 August 1949, is applicable to the Arab territories occupied by Israel since 1967, including Jerusalem". It called "*once more upon* Israel, as the occupying Power, to abide scrupulously" by that Convention.

On 20 December 1990, the Security Council, in resolution 681 (1990), urged "the Government of Israel to accept the *de jure* applicability of the Fourth Geneva Convention . . . to all the territories occupied by Israel since 1967 and to abide scrupulously by the provisions of the Convention". It further called upon "the high contracting parties to the said Fourth Geneva Convention to ensure respect by Israel, the occupying Power, for its obligations under the Convention in accordance with article 1 thereof".

Lastly, in resolutions 799 (1992) of 18 December 1992 and 904 (1994) of 18 March 1994, the Security Council reaffirmed its position concerning the applicability of the Fourth Geneva Convention in the occupied territories.

100. The Court would note finally that the Supreme Court of Israel, in a judgment dated 30 May 2004, also found that:

> "The military operations of the [Israeli Defence Forces] in Rafah,

> to the extent they affect civilians, are governed by Hague Convention IV Respecting the Laws and Customs of War on Land 1907 . . . and the Geneva Convention relative to the Protection of Civilian Persons in Time of War 1949."

101. In view of the foregoing, the Court considers that the Fourth Geneva Convention is applicable in any occupied territory in the event of an armed conflict arising between two or more High Contracting Parties. Israel and Jordan were parties to that Convention when the 1967 armed conflict broke out. The Court accordingly finds that that Convention is applicable in the Palestinian territories which before the conflict lay to the east of the Green Line and which, during that conflict, were occupied by Israel, there being no need for any enquiry into the precise prior status of those territories.

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102. The participants in the proceedings before the Court also disagree whether the international human rights conventions to which Israel is party apply within the Occupied Palestinian Territory. Annex I to the report of the Secretary-General states:

> "4. Israel denies that the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights, both of which it has signed, are applicable to the occupied Palestinian territory. It asserts that humanitarian law is the protection granted in a conflict situation such as the one in the West Bank and Gaza Strip, whereas human rights treaties were intended for the protection of citizens from their own Government in times of peace."

Of the other participants in the proceedings, those who addressed this issue contend that, on the contrary, both Covenants are applicable within the Occupied Palestinian Territory.

103. On 3 October 1991 Israel ratified both the International Covenant on Economic, Social and Cultural Rights of 19 December 1966 and the International Covenant on Civil and Political Rights of the same date, as well as the United Nations Convention on the Rights of the Child of 20 November 1989. It is a party to these three instruments.

104. In order to determine whether these texts are applicable in the Occupied Palestinian Territory, the Court will first address the issue of the relationship between international humanitarian law and human rights law and then that of the applicability of human rights instruments outside national territory.

105. In its Advisory Opinion of 8 July 1996 on the *Legality of the Threat or Use of Nuclear Weapons*, the Court had occasion to address the first of these issues in relation to the International Covenant on Civil

and Political Rights. In those proceedings certain States had argued that "the Covenant was directed to the protection of human rights in peacetime, but that questions relating to unlawful loss of life in hostilities were governed by the law applicable in armed conflict" (*I.C.J. Reports 1996 (I)*, p. 239, para. 24).

The Court rejected this argument, stating that:

> "the protection of the International Covenant of Civil and Political Rights does not cease in times of war, except by operation of Article 4 of the Covenant whereby certain provisions may be derogated from in a time of national emergency. Respect for the right to life is not, however, such a provision. In principle, the right not arbitrarily to be deprived of one's life applies also in hostilities. The test of what is an arbitrary deprivation of life, however, then falls to be determined by the applicable *lex specialis*, namely, the law applicable in armed conflict which is designed to regulate the conduct of hostilities." (*Ibid.*, p. 240, para. 25.)

106. More generally, the Court considers that the protection offered by human rights conventions does not cease in case of armed conflict, save through the effect of provisions for derogation of the kind to be found in Article 4 of the International Covenant on Civil and Political Rights. As regards the relationship between international humanitarian law and human rights law, there are thus three possible situations: some rights may be exclusively matters of international humanitarian law; others may be exclusively matters of human rights law; yet others may be matters of both these branches of international law. In order to answer the question put to it, the Court will have to take into consideration both these branches of international law, namely human rights law and, as *lex specialis*, international humanitarian law.

107. It remains to be determined whether the two international Covenants and the Convention on the Rights of the Child are applicable only on the territories of the States parties thereto or whether they are also applicable outside those territories and, if so, in what circumstances.

108. The scope of application of the International Covenant on Civil and Political Rights is defined by Article 2, paragraph 1, thereof, which provides:

> "Each State Party to the present Covenant undertakes to respect and to ensure to all individuals within its territory and subject to its jurisdiction the rights recognized in the present Covenant, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status."

This provision can be interpreted as covering only individuals who are both present within a State's territory and subject to that State's jurisdiction. It can also be construed as covering both individuals present within a State's territory and those outside that territory but subject to that State's jurisdiction. The Court will thus seek to determine the meaning to be given to this text.

109. The Court would observe that, while the jurisdiction of States is primarily territorial, it may sometimes be exercised outside the national territory. Considering the object and purpose of the International Covenant on Civil and Political Rights, it would seem natural that, even when such is the case, States parties to the Covenant should be bound to comply with its provisions.

The constant practice of the Human Rights Committee is consistent with this. Thus, the Committee has found the Covenant applicable where the State exercises its jurisdiction on foreign territory. It has ruled on the legality of acts by Uruguay in cases of arrests carried out by Uruguayan agents in Brazil or Argentina (case No. 52/79, *López Burgos* v. *Uruguay*; case No. 56/79, *Lilian Celiberti de Casariego* v. *Uruguay*). It decided to the same effect in the case of the confiscation of a passport by a Uruguayan consulate in Germany (case No. 106/81, *Montero* v. *Uruguay*).

The *travaux préparatoires* of the Covenant confirm the Committee's interpretation of Article 2 of that instrument. These show that, in adopting the wording chosen, the drafters of the Covenant did not intend to allow States to escape from their obligations when they exercise jurisdiction outside their national territory. They only intended to prevent persons residing abroad from asserting, vis-à-vis their State of origin, rights that do not fall within the competence of that State, but of that of the State of residence (see the discussion of the preliminary draft in the Commission on Human Rights, E/CN.4/SR.194, para. 46; and United Nations, *Official Records of the General Assembly, Tenth Session, Annexes*, A/2929, Part II, Chap. V, para. 4 (1955)).

110. The Court takes note in this connection of the position taken by Israel, in relation to the applicability of the Covenant, in its communications to the Human Rights Committee, and of the view of the Committee.

In 1998, Israel stated that, when preparing its report to the Committee, it had had to face the question "whether individuals resident in the occupied territories were indeed subject to Israel's jurisdiction" for purposes of the application of the Covenant (CCPR/C/SR.1675, para. 21). Israel took the position that "the Covenant and similar instruments did not apply directly to the current situation in the occupied territories" (*ibid.*, para. 27).

The Committee, in its concluding observations after examination of the report, expressed concern at Israel's attitude and pointed "to the long-standing presence of Israel in [the occupied] territories, Israel's

ambiguous attitude towards their future status, as well as the exercise of effective jurisdiction by Israeli security forces therein" (CCPR/C/79/Add.93, para. 10). In 2003 in face of Israel's consistent position, to the effect that "the Covenant does not apply beyond its own territory, notably in the West Bank and Gaza . . .", the Committee reached the following conclusion:

> "in the current circumstances, the provisions of the Covenant apply to the benefit of the population of the Occupied Territories, for all conduct by the State party's authorities or agents in those territories that affect the enjoyment of rights enshrined in the Covenant and fall within the ambit of State responsibility of Israel under the principles of public international law" (CCPR/CO/78/ISR, para. 11).

111. In conclusion, the Court considers that the International Covenant on Civil and Political Rights is applicable in respect of acts done by a State in the exercise of its jurisdiction outside its own territory.

112. The International Covenant on Economic, Social and Cultural Rights contains no provision on its scope of application. This may be explicable by the fact that this Covenant guarantees rights which are essentially territorial. However, it is not to be excluded that it applies both to territories over which a State party has sovereignty and to those over which that State exercises territorial jurisdiction. Thus Article 14 makes provision for transitional measures in the case of any State which "at the time of becoming a Party, has not been able to secure in its metropolitan territory or other territories under its jurisdiction compulsory primary education, free of charge".

It is not without relevance to recall in this regard the position taken by Israel in its reports to the Committee on Economic, Social and Cultural Rights. In its initial report to the Committee of 4 December 1998, Israel provided "statistics indicating the enjoyment of the rights enshrined in the Covenant by Israeli settlers in the occupied Territories". The Committee noted that, according to Israel, "the Palestinian population within the same jurisdictional areas were excluded from both the report and the protection of the Covenant" (E/C.12/1/Add.27, para. 8). The Committee expressed its concern in this regard, to which Israel replied in a further report of 19 October 2001 that it has "consistently maintained that the Covenant does not apply to areas that are not subject to its sovereign territory and jurisdiction" (a formula inspired by the language of the International Covenant on Civil and Political Rights). This position, continued Israel, is "based on the well-established distinction between human rights and humanitarian law under international law". It added: "the Committee's mandate cannot relate to events in the West Bank and the Gaza Strip, inasmuch as they are part and parcel of the context of armed conflict as distinct from a relationship of human rights" (E/1990/6/Add.32, para. 5). In view of these observations, the Committee reiterated

its concern about Israel's position and reaffirmed "its view that the State party's obligations under the Covenant apply to all territories and populations under its effective control" (E/C.12/1/Add.90, paras. 15 and 31).

For the reasons explained in paragraph 106 above, the Court cannot accept Israel's view. It would also observe that the territories occupied by Israel have for over 37 years been subject to its territorial jurisdiction as the occupying Power. In the exercise of the powers available to it on this basis, Israel is bound by the provisions of the International Covenant on Economic, Social and Cultural Rights. Furthermore, it is under an obligation not to raise any obstacle to the exercise of such rights in those fields where competence has been transferred to Palestinian authorities.

113. As regards the Convention on the Rights of the Child of 20 November 1989, that instrument contains an Article 2 according to which "States Parties shall respect and ensure the rights set forth in the . . . Convention to each child within their jurisdiction . . .". That Convention is therefore applicable within the Occupied Palestinian Territory.

* *

114. Having determined the rules and principles of international law relevant to reply to the question posed by the General Assembly, and having ruled in particular on the applicability within the Occupied Palestinian Territory of international humanitarian law and human rights law, the Court will now seek to ascertain whether the construction of the wall has violated those rules and principles.

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115. In this regard, Annex II to the report of the Secretary-General, entitled "Summary Legal Position of the Palestine Liberation Organization", states that "The construction of the Barrier is an attempt to annex the territory contrary to international law" and that "The de facto annexation of land interferes with the territorial sovereignty and consequently with the right of the Palestinians to self-determination." This view was echoed in certain of the written statements submitted to the Court and in the views expressed at the hearings. *Inter alia*, it was contended that:

> "The wall severs the territorial sphere over which the Palestinian people are entitled to exercise their right of self-determination and constitutes a violation of the legal principle prohibiting the acquisition of territory by the use of force."

In this connection, it was in particular emphasized that "[t]he route of the wall is designed to change the demographic composition of the Occupied Palestinian Territory, including East Jerusalem, by reinforcing the Israeli

settlements" illegally established on the Occupied Palestinian Territory. It was further contended that the wall aimed at "reducing and parcelling out the territorial sphere over which the Palestinian people are entitled to exercise their right of self-determination".

116. For its part, Israel has argued that the wall's sole purpose is to enable it effectively to combat terrorist attacks launched from the West Bank. Furthermore, Israel has repeatedly stated that the Barrier is a temporary measure (see report of the Secretary-General, para. 29). It did so *inter alia* through its Permanent Representative to the United Nations at the Security Council meeting of 14 October 2003, emphasizing that "[the fence] does not annex territories to the State of Israel", and that Israel is "ready and able, at tremendous cost, to adjust or dismantle a fence if so required as part of a political settlement" (S/PV.4841, p. 10). Israel's Permanent Representative restated this view before the General Assembly on 20 October and 8 December 2003. On this latter occasion, he added:

> "As soon as the terror ends, the fence will no longer be necessary. The fence is not a border and has no political significance. It does not change the legal status of the territory in any way." (A/ES-10/PV.23, p. 6.)

117. The Court would recall that both the General Assembly and the Security Council have referred, with regard to Palestine, to the customary rule of "the inadmissibility of the acquisition of territory by war" (see paragraphs 74 and 87 above). Thus in resolution 242 (1967) of 22 November 1967, the Security Council, after recalling this rule, affirmed that:

> "the fulfilment of Charter principles requires the establishment of a just and lasting peace in the Middle East which should include the application of both the following principles:
>
> (i) Withdrawal of Israel armed forces from territories occupied in the recent conflict;
> (ii) Termination of all claims or states of belligerency and respect for and acknowledgement of the sovereignty, territorial integrity and political independence of every State in the area and their right to live in peace within secure and recognized boundaries free from threats or acts of force".

It is on this same basis that the Council has several times condemned the measures taken by Israel to change the status of Jerusalem (see paragraph 75 above).

118. As regards the principle of the right of peoples to self-determination, the Court observes that the existence of a "Palestinian people" is no

longer in issue. Such existence has moreover been recognized by Israel in the exchange of letters of 9 September 1993 between Mr. Yasser Arafat, President of the Palestine Liberation Organization (PLO) and Mr. Yitzhak Rabin, Israeli Prime Minister. In that correspondence, the President of the PLO recognized "the right of the State of Israel to exist in peace and security" and made various other commitments. In reply, the Israeli Prime Minister informed him that, in the light of those commitments, "the Government of Israel has decided to recognize the PLO as the representative of the Palestinian people". The Israeli-Palestinian Interim Agreement on the West Bank and the Gaza Strip of 28 September 1995 also refers a number of times to the Palestinian people and its "legitimate rights" (Preamble, paras. 4, 7, 8; Article II, para. 2; Article III, paras. 1 and 3; Article XXII, para. 2). The Court considers that those rights include the right to self-determination, as the General Assembly has moreover recognized on a number of occasions (see, for example, resolution 58/163 of 22 December 2003).

119. The Court notes that the route of the wall as fixed by the Israeli Government includes within the "Closed Area" (see paragraph 85 above) some 80 per cent of the settlers living in the Occupied Palestinian Territory. Moreover, it is apparent from an examination of the map mentioned in paragraph 80 above that the wall's sinuous route has been traced in such a way as to include within that area the great majority of the Israeli settlements in the occupied Palestinian Territory (including East Jerusalem).

120. As regards these settlements, the Court notes that Article 49, paragraph 6, of the Fourth Geneva Convention provides: "The Occupying Power shall not deport or transfer parts of its own civilian population into the territory it occupies." That provision prohibits not only deportations or forced transfers of population such as those carried out during the Second World War, but also any measures taken by an occupying Power in order to organize or encourage transfers of parts of its own population into the occupied territory.

In this respect, the information provided to the Court shows that, since 1977, Israel has conducted a policy and developed practices involving the establishment of settlements in the Occupied Palestinian Territory, contrary to the terms of Article 49, paragraph 6, just cited.

The Security Council has thus taken the view that such policy and practices "have no legal validity". It has also called upon "Israel, as the occupying Power, to abide scrupulously" by the Fourth Geneva Convention and:

> "to rescind its previous measures and to desist from taking any action which would result in changing the legal status and geographical nature and materially affecting the demographic composition of the Arab territories occupied since 1967, including Jerusalem

> and, in particular, not to transfer parts of its own civilian population into the occupied Arab territories" (resolution 446 (1979) of 22 March 1979).

The Council reaffirmed its position in resolutions 452 (1979) of 20 July 1979 and 465 (1980) of 1 March 1980. Indeed, in the latter case it described "Israel's policy and practices of settling parts of its population and new immigrants in [the occupied] territories" as a "flagrant violation" of the Fourth Geneva Convention.

The Court concludes that the Israeli settlements in the Occupied Palestinian Territory (including East Jerusalem) have been established in breach of international law.

121. Whilst the Court notes the assurance given by Israel that the construction of the wall does not amount to annexation and that the wall is of a temporary nature (see paragraph 116 above), it nevertheless cannot remain indifferent to certain fears expressed to it that the route of the wall will prejudge the future frontier between Israel and Palestine, and the fear that Israel may integrate the settlements and their means of access. The Court considers that the construction of the wall and its associated régime create a "fait accompli" on the ground that could well become permanent, in which case, and notwithstanding the formal characterization of the wall by Israel, it would be tantamount to *de facto* annexation.

122. The Court recalls moreover that, according to the report of the Secretary-General, the planned route would incorporate in the area between the Green Line and the wall more than 16 per cent of the territory of the West Bank. Around 80 per cent of the settlers living in the Occupied Palestinian Territory, that is 320,000 individuals, would reside in that area, as well as 237,000 Palestinians. Moreover, as a result of the construction of the wall, around 160,000 other Palestinians would reside in almost completely encircled communities (see paragraphs 84, 85 and 119 above).

In other terms, the route chosen for the wall gives expression *in loco* to the illegal measures taken by Israel with regard to Jerusalem and the settlements, as deplored by the Security Council (see paragraphs 75 and 120 above). There is also a risk of further alterations to the demographic composition of the Occupied Palestinian Territory resulting from the construction of the wall inasmuch as it is contributing, as will be further explained in paragraph 133 below, to the departure of Palestinian populations from certain areas. That construction, along with measures taken previously, thus severely impedes the exercise by the Palestinian people of its right to self-determination, and is therefore a breach of Israel's obligation to respect that right.

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123. The construction of the wall also raises a number of issues in rela-

tion to the relevant provisions of international humanitarian law and of human rights instruments.

124. With regard to the Hague Regulations of 1907, the Court would recall that these deal, in Section II, with hostilities and in particular with "means of injuring the enemy, sieges, and bombardments". Section III deals with military authority in occupied territories. Only Section III is currently applicable in the West Bank and Article 23 *(g)* of the Regulations, in Section II, is thus not pertinent.

Section III of the Hague Regulations includes Articles 43, 46 and 52, which are applicable in the Occupied Palestinian Territory. Article 43 imposes a duty on the occupant to "take all measures within his power to restore, and, as far as possible, to insure public order and life, respecting the laws in force in the country". Article 46 adds that private property must be "respected" and that it cannot "be confiscated". Lastly, Article 52 authorizes, within certain limits, requisitions in kind and services for the needs of the army of occupation.

125. A distinction is also made in the Fourth Geneva Convention between provisions applying during military operations leading to occupation and those that remain applicable throughout the entire period of occupation. It thus states in Article 6:

> "The present Convention shall apply from the outset of any conflict or occupation mentioned in Article 2.
>
> In the territory of Parties to the conflict, the application of the present Convention shall cease on the general close of military operations.
>
> In the case of occupied territory, the application of the present Convention shall cease one year after the general close of military operations; however, the Occupying Power shall be bound, for the duration of the occupation, to the extent that such Power exercises the functions of government in such territory, by the provisions of the following Articles of the present Convention: 1 to 12, 27, 29 to 34, 47, 49, 51, 52, 53, 59, 61 to 77, 143.
>
> Protected persons whose release, repatriation or re-establishment may take place after such dates shall meanwhile continue to benefit by the present Convention."

Since the military operations leading to the occupation of the West Bank in 1967 ended a long time ago, only those Articles of the Fourth Geneva Convention referred to in Article 6, paragraph 3, remain applicable in that occupied territory.

126. These provisions include Articles 47, 49, 52, 53 and 59 of the Fourth Geneva Convention.

According to Article 47:

> "Protected persons who are in occupied territory shall not be

deprived, in any case or in any manner whatsoever, of the benefits of the present Convention by any change introduced, as the result of the occupation of a territory, into the institutions or government of the said territory, nor by any agreement concluded between the authorities of the occupied territories and the Occupying Power, nor by any annexation by the latter of the whole or part of the occupied territory."

Article 49 reads as follows:

"Individual or mass forcible transfers, as well as deportations of protected persons from occupied territory to the territory of the Occupying Power or to that of any other country, occupied or not, are prohibited, regardless of their motive.

Nevertheless, the Occupying Power may undertake total or partial evacuation of a given area if the security of the population or imperative military reasons so demand. Such evacuations may not involve the displacement of protected persons outside the bounds of the occupied territory except when for material reasons it is impossible to avoid such displacement. Persons thus evacuated shall be transferred back to their homes as soon as hostilities in the area in question have ceased.

The Occupying Power undertaking such transfers or evacuations shall ensure, to the greatest practicable extent, that proper accommodation is provided to receive the protected persons, that the removals are effected in satisfactory conditions of hygiene, health, safety and nutrition, and that members of the same family are not separated.

The Protecting Power shall be informed of any transfers and evacuations as soon as they have taken place.

The Occupying Power shall not detain protected persons in an area particularly exposed to the dangers of war unless the security of the population or imperative military reasons so demand.

The Occupying Power shall not deport or transfer parts of its own civilian population into the territory it occupies."

According to Article 52:

"No contract, agreement or regulation shall impair the right of any worker, whether voluntary or not and wherever he may be, to apply to the representatives of the Protecting Power in order to request the said Power's intervention.

All measures aiming at creating unemployment or at restricting the opportunities offered to workers in an occupied territory, in order to induce them to work for the Occupying Power, are prohibited."

54

Article 53 provides that:

> "Any destruction by the Occupying Power of real or personal property belonging individually or collectively to private persons, or to the State, or to other public authorities, or to social or co-operative organizations, is prohibited, except where such destruction is rendered absolutely necessary by military operations."

Lastly, according to Article 59:

> "If the whole or part of the population of an occupied territory is inadequately supplied, the Occupying Power shall agree to relief schemes on behalf of the said population, and shall facilitate them by all the means at its disposal.
>
> Such schemes, which may be undertaken either by States or by impartial humanitarian organizations such as the International Committee of the Red Cross, shall consist, in particular, of the provision of consignments of foodstuffs, medical supplies and clothing.
>
> All Contracting Parties shall permit the free passage of these consignments and shall guarantee their protection.
>
> A Power granting free passage to consignments on their way to territory occupied by an adverse Party to the conflict shall, however, have the right to search the consignments, to regulate their passage according to prescribed times and routes, and to be reasonably satisfied through the Protecting Power that these consignments are to be used for the relief of the needy population and are not to be used for the benefit of the Occupying Power."

127. The International Covenant on Civil and Political Rights also contains several relevant provisions. Before further examining these, the Court will observe that Article 4 of the Covenant allows for derogation to be made, under various conditions, to certain provisions of that instrument. Israel made use of its right of derogation under this Article by addressing the following communication to the Secretary-General of the United Nations on 3 October 1991:

> "Since its establishment, the State of Israel has been the victim of continuous threats and attacks on its very existence as well as on the life and property of its citizens.
>
> These have taken the form of threats of war, of actual armed attacks, and campaigns of terrorism resulting in the murder of and injury to human beings.
>
> In view of the above, the State of Emergency which was proclaimed in May 1948 has remained in force ever since. This situation constitutes a public emergency within the meaning of article 4 (1) of the Covenant.
>
> The Government of Israel has therefore found it necessary, in accordance with the said article 4, to take measures to the extent strictly required by the exigencies of the situation, for the defence of

> the State and for the protection of life and property, including the exercise of powers of arrest and detention.
>
> In so far as any of these measures are inconsistent with article 9 of the Covenant, Israel thereby derogates from its obligations under that provision."

The Court notes that the derogation so notified concerns only Article 9 of the International Covenant on Civil and Political Rights, which deals with the right to liberty and security of person and lays down the rules applicable in cases of arrest or detention. The other Articles of the Covenant therefore remain applicable not only on Israeli territory, but also on the Occupied Palestinian Territory.

128. Among these mention must be made of Article 17, paragraph 1 of which reads as follows: "No one shall be subjected to arbitrary or unlawful interference with his privacy, family, home or correspondence, nor to unlawful attacks on his honour and reputation."

Mention must also be made of Article 12, paragraph 1, which provides: "Everyone lawfully within the territory of a State shall, within that territory, have the right to liberty of movement and freedom to choose his residence."

129. In addition to the general guarantees of freedom of movement under Article 12 of the International Covenant on Civil and Political Rights, account must also be taken of specific guarantees of access to the Christian, Jewish and Islamic Holy Places. The status of the Christian Holy Places in the Ottoman Empire dates far back in time, the latest provisions relating thereto having been incorporated into Article 62 of the Treaty of Berlin of 13 July 1878. The Mandate for Palestine given to the British Government on 24 July 1922 included an Article 13, under which:

> "All responsibility in connection with the Holy Places and religious buildings or sites in Palestine, including that of preserving existing rights and of securing free access to the Holy Places, religious buildings and sites and the free exercise of worship, while ensuring the requirements of public order and decorum, is assumed by the Mandatory . . ."

Article 13 further stated: "nothing in this mandate shall be construed as conferring . . . authority to interfere with the fabric or the management of purely Moslem sacred shrines, the immunities of which are guaranteed".

In the aftermath of the Second World War, the General Assembly, in adopting resolution 181 (II) on the future government of Palestine, devoted an entire chapter of the Plan of Partition to the Holy Places, religious buildings and sites. Article 2 of this Chapter provided, in so far as the Holy Places were concerned:

> "the liberty of access, visit and transit shall be guaranteed, in conformity with existing rights, to all residents and citizens [of the Arab

> State, of the Jewish State] and of the City of Jerusalem, as well as to aliens, without distinction as to nationality, subject to requirements of national security, public order and decorum".

Subsequently, in the aftermath of the armed conflict of 1948, the 1949 General Armistice Agreement between Jordan and Israel provided in Article VIII for the establishment of a special committee for "the formulation of agreed plans and arrangements for such matters as either Party may submit to it" for the purpose of enlarging the scope of the Agreement and of effecting improvement in its application. Such matters, on which an agreement of principle had already been concluded, included "free access to the Holy Places".

This commitment concerned mainly the Holy Places located to the east of the Green Line. However, some Holy Places were located west of that Line. This was the case of the Room of the Last Supper and the Tomb of David, on Mount Zion. In signing the General Armistice Agreement, Israel thus undertook, as did Jordan, to guarantee freedom of access to the Holy Places. The Court considers that this undertaking by Israel has remained valid for the Holy Places which came under its control in 1967. This undertaking has further been confirmed by Article 9, paragraph 1, of the 1994 Peace Treaty between Israel and Jordan, by virtue of which, in more general terms, "Each party will provide freedom of access to places of religious and historical significance."

130. As regards the International Covenant on Economic, Social and Cultural Rights, that instrument includes a number of relevant provisions, namely: the right to work (Arts. 6 and 7); protection and assistance accorded to the family and to children and young persons (Art. 10); the right to an adequate standard of living, including adequate food, clothing and housing, and the right "to be free from hunger" (Art. 11); the right to health (Art. 12); the right to education (Arts. 13 and 14).

131. Lastly, the United Nations Convention on the Rights of the Child of 20 November 1989 includes similar provisions in Articles 16, 24, 27 and 28.

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132. From the information submitted to the Court, particularly the report of the Secretary-General, it appears that the construction of the wall has led to the destruction or requisition of properties under conditions which contravene the requirements of Articles 46 and 52 of the Hague Regulations of 1907 and of Article 53 of the Fourth Geneva Convention.

133. That construction, the establishment of a closed area between the Green Line and the wall itself and the creation of enclaves have moreover imposed substantial restrictions on the freedom of movement of the inhabitants of the Occupied Palestinian Territory (with the exception of

Israeli citizens and those assimilated thereto). Such restrictions are most marked in urban areas, such as the Qalqiliya enclave or the City of Jerusalem and its suburbs. They are aggravated by the fact that the access gates are few in number in certain sectors and opening hours appear to be restricted and unpredictably applied. For example, according to the Special Rapporteur of the Commission on Human Rights on the situation of human rights in the Palestinian territories occupied by Israel since 1967, "Qalqiliya, a city with a population of 40,000, is completely surrounded by the Wall and residents can only enter and leave through a single military checkpoint open from 7 a.m. to 7 p.m." (Report of the Special Rapporteur of the Commission on Human Rights, John Dugard, on the situation of human rights in the Palestinian territories occupied by Israel since 1967, submitted in accordance with Commission resolution 1993/2 A and entitled "Question of the Violation of Human Rights in the Occupied Arab Territories, including Palestine", E/CN.4/2004/6, 8 September 2003, para. 9.)

There have also been serious repercussions for agricultural production, as is attested by a number of sources. According to the Special Committee to Investigate Israeli Practices Affecting the Human Rights of the Palestinian People and Other Arabs of the Occupied Territories

> "an estimated 100,000 dunums [approximately 10,000 hectares] of the West Bank's most fertile agricultural land, confiscated by the Israeli Occupation Forces, have been destroyed during the first phase of the wall construction, which involves the disappearance of vast amounts of property, notably private agricultural land and olive trees, wells, citrus grows and hothouses upon which tens of thousands of Palestinians rely for their survival" (Report of the Special Committee to Investigate Israeli Practices Affecting the Human Rights of the Palestinian People and Other Arabs of the Occupied Territories, A/58/311, 22 August 2003, para. 26).

Further, the Special Rapporteur on the situation of human rights in the Palestinian territories occupied by Israel since 1967 states that "Much of the Palestinian land on the Israeli side of the Wall consists of fertile agricultural land and some of the most important water wells in the region" and adds that "Many fruit and olive trees had been destroyed in the course of building the barrier" (E/CN.4/2004/6, 8 September 2003, para. 9). The Special Rapporteur on the Right to Food of the United Nations Commission on Human Rights states that construction of the wall "cuts off Palestinians from their agricultural lands, wells and means of subsistence" (Report by the Special Rapporteur of the United Nations Commission on Human Rights, Jean Ziegler, "The Right to Food", Addendum, Mission to the Occupied Palestinian Territories, E/CN.4/2004/10/Add.2, 31 October 2003, para. 49). In a recent survey conducted by the World Food Programme, it is stated that the situation has aggra-

vated food insecurity in the region, which reportedly numbers 25,000 new beneficiaries of food aid (report of the Secretary-General, para. 25).

It has further led to increasing difficulties for the population concerned regarding access to health services, educational establishments and primary sources of water. This is also attested by a number of different information sources. Thus the report of the Secretary-General states generally that "According to the Palestinian Central Bureau of Statistics, so far the Barrier has separated 30 localities from health services, 22 from schools, 8 from primary water sources and 3 from electricity networks." (Report of the Secretary-General, para. 23.) The Special Rapporteur of the United Nations Commission on Human Rights on the situation of human rights in the Palestinian territories occupied by Israel since 1967 states that "Palestinians between the Wall and Green Line will effectively be cut off from their land and workplaces, schools, health clinics and other social services." (E/CN.4/2004/6, 8 September 2003, para. 9.) In relation specifically to water resources, the Special Rapporteur on the Right to Food of the United Nations Commission on Human Rights observes that "By constructing the fence Israel will also effectively annex most of the western aquifer system (which provides 51 per cent of the West Bank's water resources)." (E/CN.4/2004/10/Add.2, 31 October 2003, para. 51.) Similarly, in regard to access to health services, it has been stated that, as a result of the enclosure of Qalqiliya, a United Nations hospital in that town has recorded a 40 per cent decrease in its caseload (report of the Secretary-General, para. 24).

At Qalqiliya, according to reports furnished to the United Nations, some 600 shops or businesses have shut down, and 6,000 to 8,000 people have already left the region (E/CN.4/2004/6, 8 September 2003, para. 10; E/CN.4/2004/10/Add.2, 31 October 2003, para. 51). The Special Rapporteur on the Right to Food of the United Nations Commission on Human Rights has also observed that "With the fence/wall cutting communities off from their land and water without other means of subsistence, many of the Palestinians living in these areas will be forced to leave." (E/CN.4/2004/10/Add.2, 31 October 2003, para. 51.) In this respect also the construction of the wall would effectively deprive a significant number of Palestinians of the "freedom to choose [their] residence". In addition, however, in the view of the Court, since a significant number of Palestinians have already been compelled by the construction of the wall and its associated régime to depart from certain areas, a process that will continue as more of the wall is built, that construction, coupled with the establishment of the Israeli settlements mentioned in paragraph 120 above, is tending to alter the demographic composition of the Occupied Palestinian Territory.

134. To sum up, the Court is of the opinion that the construction of the wall and its associated régime impede the liberty of movement of the inhabitants of the Occupied Palestinian Territory (with the exception

of Israeli citizens and those assimilated thereto) as guaranteed under Article 12, paragraph 1, of the International Covenant on Civil and Political Rights. They also impede the exercise by the persons concerned of the right to work, to health, to education and to an adequate standard of living as proclaimed in the International Covenant on Economic, Social and Cultural Rights and in the United Nations Convention on the Rights of the Child. Lastly, the construction of the wall and its associated régime, by contributing to the demographic changes referred to in paragraphs 122 and 133 above, contravene Article 49, paragraph 6, of the Fourth Geneva Convention and the Security Council resolutions cited in paragraph 120 above.

135. The Court would observe, however, that the applicable international humanitarian law contains provisions enabling account to be taken of military exigencies in certain circumstances.

Neither Article 46 of the Hague Regulations of 1907 nor Article 47 of the Fourth Geneva Convention contain any qualifying provision of this type. With regard to forcible transfers of population and deportations, which are prohibited under Article 49, paragraph 1, of the Convention, paragraph 2 of that Article provides for an exception in those cases in which "the security of the population or imperative military reasons so demand". This exception however does not apply to paragraph 6 of that Article, which prohibits the occupying Power from deporting or transferring parts of its own civilian population into the territories it occupies. As to Article 53 concerning the destruction of personal property, it provides for an exception "where such destruction is rendered absolutely necessary by military operations".

The Court considers that the military exigencies contemplated by these texts may be invoked in occupied territories even after the general close of the military operations that led to their occupation. However, on the material before it, the Court is not convinced that the destructions carried out contrary to the prohibition in Article 53 of the Fourth Geneva Convention were rendered absolutely necessary by military operations.

136. The Court would further observe that some human rights conventions, and in particular the International Covenant on Civil and Political Rights, contain provisions which States parties may invoke in order to derogate, under various conditions, from certain of their conventional obligations. In this respect, the Court would however recall that the communication notified by Israel to the Secretary-General of the United Nations under Article 4 of the International Covenant on Civil and Political Rights concerns only Article 9 of the Covenant, relating to the right to freedom and security of person (see paragraph 127 above); Israel is accordingly bound to respect all the other provisions of that instrument.

The Court would note, moreover, that certain provisions of human rights conventions contain clauses qualifying the rights covered by those provisions. There is no clause of this kind in Article 17 of the Interna-

tional Covenant on Civil and Political Rights. On the other hand, Article 12, paragraph 3, of that instrument provides that restrictions on liberty of movement as guaranteed under that Article

> "shall not be subject to any restrictions except those which are provided by law, are necessary to protect national security, public order *(ordre public)*, public health or morals or the rights and freedoms of others, and are consistent with the other rights recognized in the present Covenant".

As for the International Covenant on Economic, Social and Cultural Rights, Article 4 thereof contains a general provision as follows:

> "The States Parties to the present Covenant recognize that, in the enjoyment of those rights provided by the State in conformity with the present Covenant, the State may subject such rights only to such limitations as are determined by law only in so far as this may be compatible with the nature of these rights and solely for the purpose of promoting the general welfare in a democratic society."

The Court would observe that the restrictions provided for under Article 12, paragraph 3, of the International Covenant on Civil and Political Rights are, by the very terms of that provision, exceptions to the right of freedom of movement contained in paragraph 1. In addition, it is not sufficient that such restrictions be directed to the ends authorized; they must also be necessary for the attainment of those ends. As the Human Rights Committee put it, they "must conform to the principle of proportionality" and "must be the least intrusive instrument amongst those which might achieve the desired result" (CCPR/C/21/Rev.1/Add.9, General Comment No. 27, para. 14). On the basis of the information available to it, the Court finds that these conditions are not met in the present instance.

The Court would further observe that the restrictions on the enjoyment by the Palestinians living in the territory occupied by Israel of their economic, social and cultural rights, resulting from Israel's construction of the wall, fail to meet a condition laid down by Article 4 of the International Covenant on Economic, Social and Cultural Rights, that is to say that their implementation must be "solely for the purpose of promoting the general welfare in a democratic society".

137. To sum up, the Court, from the material available to it, is not convinced that the specific course Israel has chosen for the wall was necessary to attain its security objectives. The wall, along the route chosen, and its associated régime gravely infringe a number of rights of Palestinians residing in the territory occupied by Israel, and the infringements resulting from that route cannot be justified by military exigencies or by the requirements of national security or public order. The construction of such a wall accordingly constitutes breaches by Israel of various

of its obligations under the applicable international humanitarian law and human rights instruments.

*

138. The Court has thus concluded that the construction of the wall constitutes action not in conformity with various international legal obligations incumbent upon Israel. However, Annex I to the report of the Secretary-General states that, according to Israel: "the construction of the Barrier is consistent with Article 51 of the Charter of the United Nations, its inherent right to self-defence and Security Council resolutions 1368 (2001) and 1373 (2001)". More specifically, Israel's Permanent Representative to the United Nations asserted in the General Assembly on 20 October 2003 that "the fence is a measure wholly consistent with the right of States to self-defence enshrined in Article 51 of the Charter"; the Security Council resolutions referred to, he continued, "have clearly recognized the right of States to use force in self-defence against terrorist attacks", and therefore surely recognize the right to use non-forcible measures to that end (A/ES-10/PV.21, p. 6).

139. Under the terms of Article 51 of the Charter of the United Nations:

> "Nothing in the present Charter shall impair the inherent right of individual or collective self-defence if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security."

Article 51 of the Charter thus recognizes the existence of an inherent right of self-defence in the case of armed attack by one State against another State. However, Israel does not claim that the attacks against it are imputable to a foreign State.

The Court also notes that Israel exercises control in the Occupied Palestinian Territory and that, as Israel itself states, the threat which it regards as justifying the construction of the wall originates within, and not outside, that territory. The situation is thus different from that contemplated by Security Council resolutions 1368 (2001) and 1373 (2001), and therefore Israel could not in any event invoke those resolutions in support of its claim to be exercising a right of self-defence.

Consequently, the Court concludes that Article 51 of the Charter has no relevance in this case.

140. The Court has, however, considered whether Israel could rely on a state of necessity which would preclude the wrongfulness of the construction of the wall. In this regard the Court is bound to note that some of the conventions at issue in the present instance include qualifying clauses of the rights guaranteed or provisions for derogation (see para-

graphs 135 and 136 above). Since those treaties already address considerations of this kind within their own provisions, it might be asked whether a state of necessity as recognized in customary international law could be invoked with regard to those treaties as a ground for precluding the wrongfulness of the measures or decisions being challenged. However, the Court will not need to consider that question. As the Court observed in the case concerning the *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, "the state of necessity is a ground recognized by customary international law" that "can only be accepted on an exceptional basis"; it "can only be invoked under certain strictly defined conditions which must be cumulatively satisfied; and the State concerned is not the sole judge of whether those conditions have been met" (*I.C.J. Reports 1997*, p. 40, para. 51). One of those conditions was stated by the Court in terms used by the International Law Commission, in a text which in its present form requires that the act being challenged be "the only way for the State to safeguard an essential interest against a grave and imminent peril" (Article 25 of the International Law Commission's Articles on Responsibility of States for Internationally Wrongful Acts; see also former Article 33 of the Draft Articles on the International Responsibility of States, with slightly different wording in the English text). In the light of the material before it, the Court is not convinced that the construction of the wall along the route chosen was the only means to safeguard the interests of Israel against the peril which it has invoked as justification for that construction.

141. The fact remains that Israel has to face numerous indiscriminate and deadly acts of violence against its civilian population. It has the right, and indeed the duty, to respond in order to protect the life of its citizens. The measures taken are bound nonetheless to remain in conformity with applicable international law.

142. In conclusion, the Court considers that Israel cannot rely on a right of self-defence or on a state of necessity in order to preclude the wrongfulness of the construction of the wall resulting from the considerations mentioned in paragraphs 122 and 137 above. The Court accordingly finds that the construction of the wall, and its associated régime, are contrary to international law.

* * *

143. The Court having concluded that, by the construction of the wall in the Occupied Palestinian Territory, including in and around East Jerusalem, and by adopting its associated régime, Israel has violated various international obligations incumbent upon it (see paragraphs 114-137 above), it must now, in order to reply to the question posed by the General Assembly, examine the consequences of those violations.

* *

144. In their written and oral observations, many participants in the proceedings before the Court contended that Israel's action in illegally constructing this wall has legal consequences not only for Israel itself, but also for other States and for the United Nations; in its Written Statement, Israel, for its part, presented no arguments regarding the possible legal consequences of the construction of the wall.

145. As regards the legal consequences for Israel, it was contended that Israel has, first, a legal obligation to bring the illegal situation to an end by ceasing forthwith the construction of the wall in the Occupied Palestinian Territory, and to give appropriate assurances and guarantees of non-repetition.

It was argued that, secondly, Israel is under a legal obligation to make reparation for the damage arising from its unlawful conduct. It was submitted that such reparation should first of all take the form of restitution, namely demolition of those portions of the wall constructed in the Occupied Palestinian Territory and annulment of the legal acts associated with its construction and the restoration of property requisitioned or expropriated for that purpose; reparation should also include appropriate compensation for individuals whose homes or agricultural holdings have been destroyed.

It was further contended that Israel is under a continuing duty to comply with all of the international obligations violated by it as a result of the construction of the wall in the Occupied Palestinian Territory and of the associated régime. It was also argued that, under the terms of the Fourth Geneva Convention, Israel is under an obligation to search for and bring before its courts persons alleged to have committed, or to have ordered to be committed, grave breaches of international humanitarian law flowing from the planning, construction and use of the wall.

146. As regards the legal consequences for States other than Israel, it was contended before the Court that all States are under an obligation not to recognize the illegal situation arising from the construction of the wall, not to render aid or assistance in maintaining that situation and to co-operate with a view to putting an end to the alleged violations and to ensuring that reparation will be made therefor.

Certain participants in the proceedings further contended that the States parties to the Fourth Geneva Convention are obliged to take measures to ensure compliance with the Convention and that, inasmuch as the construction and maintenance of the wall in the Occupied Palestinian Territory constitutes grave breaches of that Convention, the States parties to that Convention are under an obligation to prosecute or extradite the authors of such breaches. It was further observed that

> "the United Nations Security Council should consider flagrant and systematic violation of international law norm[s] and principles by

> Israel, particularly . . . international humanitarian law, and take all necessary measures to put an end [to] these violations",

and that the Security Council and the General Assembly must take due account of the advisory opinion to be given by the Court.

* *

147. Since the Court has concluded that the construction of the wall in the Occupied Palestinian Territory, including in and around East Jerusalem, and its associated régime, are contrary to various of Israel's international obligations, it follows that the responsibility of that State is engaged under international law.

148. The Court will now examine the legal consequences resulting from the violations of international law by Israel by distinguishing between, on the one hand, those arising for Israel and, on the other, those arising for other States and, where appropriate, for the United Nations. The Court will begin by examining the legal consequences of those violations for Israel.

*

149. The Court notes that Israel is first obliged to comply with the international obligations it has breached by the construction of the wall in the Occupied Palestinian Territory (see paragraphs 114-137 above). Consequently, Israel is bound to comply with its obligation to respect the right of the Palestinian people to self-determination and its obligations under international humanitarian law and international human rights law. Furthermore, it must ensure freedom of access to the Holy Places that came under its control following the 1967 War (see paragraph 129 above).

150. The Court observes that Israel also has an obligation to put an end to the violation of its international obligations flowing from the construction of the wall in the Occupied Palestinian Territory. The obligation of a State responsible for an internationally wrongful act to put an end to that act is well established in general international law, and the Court has on a number of occasions confirmed the existence of that obligation (*Military and Paramilitary Activities in and against Nicaragua (Nicaragua* v. *United States of America), Merits, Judgment, I.C.J. Reports 1986*, p. 149; *United States Diplomatic and Consular Staff in Tehran, Judgment, I.C.J. Reports 1980*, p. 44, para. 95; *Haya de la Torre, Judgment, I.C.J. Reports 1951*, p. 82).

151. Israel accordingly has the obligation to cease forthwith the works of construction of the wall being built by it in the Occupied Palestinian Territory, including in and around East Jerusalem. Moreover, in view of the Court's finding (see paragraph 143 above) that Israel's violations of

its international obligations stem from the construction of the wall and from its associated régime, cessation of those violations entails the dismantling forthwith of those parts of that structure situated within the Occupied Palestinian Territory, including in and around East Jerusalem. All legislative and regulatory acts adopted with a view to its construction, and to the establishment of its associated régime, must forthwith be repealed or rendered ineffective, except in so far as such acts, by providing for compensation or other forms of reparation for the Palestinian population, may continue to be relevant for compliance by Israel with the obligations referred to in paragraph 153 below.

152. Moreover, given that the construction of the wall in the Occupied Palestinian Territory has, *inter alia*, entailed the requisition and destruction of homes, businesses and agricultural holdings, the Court finds further that Israel has the obligation to make reparation for the damage caused to all the natural or legal persons concerned. The Court would recall that the essential forms of reparation in customary law were laid down by the Permanent Court of International Justice in the following terms:

> "The essential principle contained in the actual notion of an illegal act — a principle which seems to be established by international practice and in particular by the decisions of arbitral tribunals — is that reparation must, as far as possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed. Restitution in kind, or, if this is not possible, payment of a sum corresponding to the value which a restitution in kind would bear; the award, if need be, of damages for loss sustained which would not be covered by restitution in kind or payment in place of it — such are the principles which should serve to determine the amount of compensation due for an act contrary to international law." (*Factory at Chorzów, Merits, Judgment No. 13, 1928, P.C.I.J., Series A, No. 17*, p. 47.)

153. Israel is accordingly under an obligation to return the land, orchards, olive groves and other immovable property seized from any natural or legal person for purposes of construction of the wall in the Occupied Palestinian Territory. In the event that such restitution should prove to be materially impossible, Israel has an obligation to compensate the persons in question for the damage suffered. The Court considers that Israel also has an obligation to compensate, in accordance with the applicable rules of international law, all natural or legal persons having suffered any form of material damage as a result of the wall's construction.

*

154. The Court will now consider the legal consequences of the internationally wrongful acts flowing from Israel's construction of the wall as regards other States.

155. The Court would observe that the obligations violated by Israel include certain obligations *erga omnes*. As the Court indicated in the *Barcelona Traction* case, such obligations are by their very nature "the concern of all States" and, "In view of the importance of the rights involved, all States can be held to have a legal interest in their protection" (*Barcelona Traction, Light and Power Company, Limited, Second Phase, Judgment, I.C.J. Reports 1970*, p. 32, para. 33). The obligations *erga omnes* violated by Israel are the obligation to respect the right of the Palestinian people to self-determination, and certain of its obligations under international humanitarian law.

156. As regards the first of these, the Court has already observed (paragraph 88 above) that in the *East Timor* case, it described as "irreproachable" the assertion that "the right of peoples to self-determination, as it evolved from the Charter and from United Nations practice, has an *erga omnes* character" (*I.C.J. Reports 1995*, p. 102, para. 29). The Court would also recall that under the terms of General Assembly resolution 2625 (XXV), already mentioned above (see paragraph 88),

> "Every State has the duty to promote, through joint and separate action, realization of the principle of equal rights and self-determination of peoples, in accordance with the provisions of the Charter, and to render assistance to the United Nations in carrying out the responsibilities entrusted to it by the Charter regarding the implementation of the principle . . ."

157. With regard to international humanitarian law, the Court recalls that in its Advisory Opinion on the *Legality of the Threat or Use of Nuclear Weapons* it stated that "a great many rules of humanitarian law applicable in armed conflict are so fundamental to the respect of the human person and 'elementary considerations of humanity' . . .", that they are "to be observed by all States whether or not they have ratified the conventions that contain them, because they constitute intransgressible principles of international customary law" (*I.C.J. Reports 1996 (I)*, p. 257, para. 79). In the Court's view, these rules incorporate obligations which are essentially of an *erga omnes* character.

158. The Court would also emphasize that Article 1 of the Fourth Geneva Convention, a provision common to the four Geneva Conventions, provides that "The High Contracting Parties undertake to respect and to ensure respect for the present Convention in all circumstances." It follows from that provision that every State party to that Convention, whether or

not it is a party to a specific conflict, is under an obligation to ensure that the requirements of the instruments in question are complied with.

159. Given the character and the importance of the rights and obligations involved, the Court is of the view that all States are under an obligation not to recognize the illegal situation resulting from the construction of the wall in the Occupied Palestinian Territory, including in and around East Jerusalem. They are also under an obligation not to render aid or assistance in maintaining the situation created by such construction. It is also for all States, while respecting the United Nations Charter and international law, to see to it that any impediment, resulting from the construction of the wall, to the exercise by the Palestinian people of its right to self-determination is brought to an end. In addition, all the States parties to the Geneva Convention relative to the Protection of Civilian Persons in Time of War of 12 August 1949 are under an obligation, while respecting the United Nations Charter and international law, to ensure compliance by Israel with international humanitarian law as embodied in that Convention.

160. Finally, the Court is of the view that the United Nations, and especially the General Assembly and the Security Council, should consider what further action is required to bring to an end the illegal situation resulting from the construction of the wall and the associated régime, taking due account of the present Advisory Opinion.

* * *

161. The Court, being concerned to lend its support to the purposes and principles laid down in the United Nations Charter, in particular the maintenance of international peace and security and the peaceful settlement of disputes, would emphasize the urgent necessity for the United Nations as a whole to redouble its efforts to bring the Israeli-Palestinian conflict, which continues to pose a threat to international peace and security, to a speedy conclusion, thereby establishing a just and lasting peace in the region.

162. The Court has reached the conclusion that the construction of the wall by Israel in the Occupied Palestinian Territory is contrary to international law and has stated the legal consequences that are to be drawn from that illegality. The Court considers itself bound to add that this construction must be placed in a more general context. Since 1947, the year when General Assembly resolution 181 (II) was adopted and the Mandate for Palestine was terminated, there has been a succession of armed conflicts, acts of indiscriminate violence and repressive measures on the former mandated territory. The Court would emphasize that both Israel and Palestine are under an obligation scrupulously to observe the rules of international humanitarian law, one of the paramount purposes of which is to protect civilian life. Illegal actions and unilateral decisions have been taken on all sides, whereas, in the Court's view, this tragic

situation can be brought to an end only through implementation in good faith of all relevant Security Council resolutions, in particular resolutions 242 (1967) and 338 (1973). The "Roadmap" approved by Security Council resolution 1515 (2003) represents the most recent of efforts to initiate negotiations to this end. The Court considers that it has a duty to draw the attention of the General Assembly, to which the present Opinion is addressed, to the need for these efforts to be encouraged with a view to achieving as soon as possible, on the basis of international law, a negotiated solution to the outstanding problems and the establishment of a Palestinian State, existing side by side with Israel and its other neighbours, with peace and security for all in the region.

* * *

163. For these reasons,

THE COURT,

(1) Unanimously,

Finds that it has jurisdiction to give the advisory opinion requested;

(2) By fourteen votes to one,

Decides to comply with the request for an advisory opinion;

IN FAVOUR: *President* Shi; *Vice-President* Ranjeva; *Judges* Guillaume, Koroma, Vereshchetin, Higgins, Parra-Aranguren, Kooijmans, Rezek, Al-Khasawneh, Elaraby, Owada, Simma, Tomka;

AGAINST: *Judge* Buergenthal;

(3) *Replies* in the following manner to the question put by the General Assembly:

A. By fourteen votes to one,

The construction of the wall being built by Israel, the occupying Power, in the Occupied Palestinian Territory, including in and around East Jerusalem, and its associated régime, are contrary to international law;

IN FAVOUR: *President* Shi; *Vice-President* Ranjeva; *Judges* Guillaume, Koroma, Vereshchetin, Higgins, Parra-Aranguren, Kooijmans, Rezek, Al-Khasawneh, Elaraby, Owada, Simma, Tomka;

AGAINST: *Judge* Buergenthal;

B. By fourteen votes to one,

Israel is under an obligation to terminate its breaches of international law; it is under an obligation to cease forthwith the works of construction of the wall being built in the Occupied Palestinian Territory, including in and around East Jerusalem, to dismantle forthwith the structure therein situated, and to repeal or render ineffective forthwith

all legislative and regulatory acts relating thereto, in accordance with paragraph 151 of this Opinion;

IN FAVOUR: *President* Shi; *Vice-President* Ranjeva; *Judges* Guillaume, Koroma, Vereshchetin, Higgins, Parra-Aranguren, Kooijmans, Rezek, Al-Khasawneh, Elaraby, Owada, Simma, Tomka;

AGAINST: *Judge* Buergenthal;

C. By fourteen votes to one,

Israel is under an obligation to make reparation for all damage caused by the construction of the wall in the Occupied Palestinian Territory, including in and around East Jerusalem;

IN FAVOUR: *President* Shi; *Vice-President* Ranjeva; *Judges* Guillaume, Koroma, Vereshchetin, Higgins, Parra-Aranguren, Kooijmans, Rezek, Al-Khasawneh, Elaraby, Owada, Simma, Tomka;

AGAINST: *Judge* Buergenthal;

D. By thirteen votes to two,

All States are under an obligation not to recognize the illegal situation resulting from the construction of the wall and not to render aid or assistance in maintaining the situation created by such construction; all States parties to the Fourth Geneva Convention relative to the Protection of Civilian Persons in Time of War of 12 August 1949 have in addition the obligation, while respecting the United Nations Charter and international law, to ensure compliance by Israel with international humanitarian law as embodied in that Convention;

IN FAVOUR: *President* Shi; *Vice-President* Ranjeva; *Judges* Guillaume, Koroma, Vereshchetin, Higgins, Parra-Aranguren, Rezek, Al-Khasawneh, Elaraby, Owada, Simma, Tomka;

AGAINST: *Judges* Kooijmans, Buergenthal;

E. By fourteen votes to one,

The United Nations, and especially the General Assembly and the Security Council, should consider what further action is required to bring to an end the illegal situation resulting from the construction of the wall and the associated régime, taking due account of the present Advisory Opinion.

IN FAVOUR: *President* Shi; *Vice-President* Ranjeva; *Judges* Guillaume, Koroma, Vereshchetin, Higgins, Parra-Aranguren, Kooijmans, Rezek, Al-Khasawneh, Elaraby, Owada, Simma, Tomka;

AGAINST: *Judge* Buergenthal.

Done in French and in English, the French text being authoritative, at the Peace Palace, The Hague, this ninth day of July, two thousand and

four, in two copies, one of which will be placed in the archives of the Court and the other transmitted to the Secretary-General of the United Nations.

(Signed) SHI Jiuyong,
President.

(Signed) Philippe COUVREUR,
Registrar.

Judges KOROMA, HIGGINS, KOOIJMANS and AL-KHASAWNEH append separate opinions to the Advisory Opinion of the Court; Judge BUERGENTHAL appends a declaration to the Advisory Opinion of the Court; Judges ELARABY and OWADA append separate opinions to the Advisory Opinion of the Court.

(Initialled) J.Y.S.
(Initialled) Ph.C.

Annex 2

COUR INTERNATIONALE DE JUSTICE

RECUEIL DES ARRÊTS,
AVIS CONSULTATIFS ET ORDONNANCES

EFFETS JURIDIQUES DE LA SÉPARATION DE L'ARCHIPEL DES CHAGOS DE MAURICE EN 1965

AVIS CONSULTATIF DU 25 FÉVRIER 2019

2019

INTERNATIONAL COURT OF JUSTICE

REPORTS OF JUDGMENTS,
ADVISORY OPINIONS AND ORDERS

LEGAL CONSEQUENCES OF THE SEPARATION OF THE CHAGOS ARCHIPELAGO FROM MAURITIUS IN 1965

ADVISORY OPINION OF 25 FEBRUARY 2019

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LEGAL CONSEQUENCES OF THE SEPARATION OF THE CHAGOS ARCHIPELAGO FROM MAURITIUS IN 1965

25 FEBRUARY 2019

ADVISORY OPINION

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OPERATIVE CLAUSE 183

INTERNATIONAL COURT OF JUSTICE

YEAR 2019

2019
25 February
General List
No. 169

25 February 2019

LEGAL CONSEQUENCES OF THE SEPARATION OF THE CHAGOS ARCHIPELAGO FROM MAURITIUS IN 1965

Events leading to the adoption of General Assembly resolution 71/292 requesting an advisory opinion.

Geographic location of Mauritius in the Indian Ocean — Chagos Archipelago, including the island of Diego Garcia, administered by the United Kingdom during colonization as a dependency of Mauritius — Adoption on 14 December 1960 of the Declaration on the Granting of Independence to Colonial Countries and Peoples (General Assembly resolution 1514 (XV)) —Establishment of the Special Committee on Decolonization ("Committee of Twenty-Four") to monitor the implementation of resolution 1514 (XV) — Lancaster House agreement between the representatives of the colony of Mauritius and the United Kingdom Government regarding the detachment of the Chagos Archipelago from Mauritius — Creation of the British Indian Ocean Territory ("BIOT"), including the Chagos Archipelago — Agreement between the United States of America and the United Kingdom concerning the availability of the BIOT for defence purposes — Adoption by the General Assembly of resolutions on the territorial integrity of non-self-governing territories — Independence of Mauritius — Forcible removal of the population of the Chagos Archipelago — Request by Mauritius for the BIOT to be disbanded and the territory restored to it — Creation of a marine protected area around the Chagos Archipelago by the United Kingdom — Challenge to the creation of a marine protected area by Mauritius before an Arbitral Tribunal and decision of the Tribunal.

* *

Jurisdiction of the Court to give the advisory opinion requested.

Article 65, paragraph 1, of the Statute — Article 96, paragraph 1, of the Charter — Competence of the General Assembly to seek advisory opinions — Request made in accordance with the Charter — Questions submitted to the Court are legal in character.

Argument that there is no exact statement of the question upon which an opinion is required — Any lack of clarity in the questions cannot deprive the Court of its jurisdiction — Arguments examined by the Court when it analyses the questions put by the General Assembly.

The Court has jurisdiction to give the advisory opinion requested.

* *

Discretion of the Court to decide whether it should give an opinion.

Integrity of the Court's judicial function — Only "compelling reasons" may lead the Court to refuse to exercise its judicial function.

Argument that advisory proceedings are not suitable for determination of complex and disputed factual issues — Sufficient information on the facts at the disposal of the Court.

Argument that the Court's response would not assist the General Assembly in the performance of its functions — Determination of the usefulness of the opinion left to the requesting organ.

Argument that an advisory opinion by the Court would reopen the findings of an Arbitral Tribunal — Opinion given to the General Assembly, not to States — Principle of res judicata *does not preclude the rendering of an advisory opinion — Issues determined by the Arbitral Tribunal not the same as those before the Court.*

Argument that the questions asked relate to a pending territorial dispute between two States, which have not consented to its settlement by the Court — Questions relate to the decolonization of Mauritius — Active role played by the General Assembly with regard to decolonization — Issues raised by the request located in the broader frame of reference of decolonization — The Court not dealing with a bilateral dispute by giving an opinion on legal issues on which divergent views are said to have been expressed by the two States — Giving the opinion requested does not have the effect of circumventing the principle of consent by a State to the judicial settlement of its dispute with another State.

No compelling reasons for the Court to decline to give the opinion requested by the General Assembly.

* *

Factual context of the separation of the Chagos Archipelago from Mauritius and the removal of Chagossians from the archipelago.

Discussions between the United Kingdom and the United States on the use of certain British-owned islands in the Indian Ocean for defence purposes — Agreement between the two parties for the establishment of a military base by the United States on the island of Diego Garcia.

Discussions between the Government of the United Kingdom and the representatives of the colony of Mauritius with respect to the Chagos Archipelago — Fourth Constitutional Conference held in London in September 1965 involving representatives of the two parties — Lancaster House agreement — Agreement in principle by representatives of the colony of Mauritius to the detachment of the Chagos Archipelago from the territory of Mauritius.

Situation of the Chagossians — Entire population of Chagos Archipelago forcibly removed from the territory between 1967 and 1973 and prevented from return-

ing — Compensation paid by the United Kingdom to certain Chagossians — Various proceedings initiated by Chagossians before United Kingdom courts, the European Court of Human Rights and the Human Rights Committee — Committee's recommendations that Chagossians should be able to exercise their right to return to their territory — Today Chagossians are dispersed in several countries, including the United Kingdom, Mauritius and Seychelles — By virtue of United Kingdom law and judicial decisions of that country, they are not allowed to return to the archipelago.

* *

Language of the questions posed in resolution 71/292 — Competence of the Court to clarify the questions put to it for an advisory opinion — No need to reformulate the questions in this instance — No need for the Court to interpret restrictively the questions put by the General Assembly.

* *

Question of whether the process of decolonization of Mauritius was lawfully completed having regard to international law.

Relevant period and applicable rules of law.

Relevant period between the separation of the Chagos Archipelago in 1965 and the independence of Mauritius in 1968 — Evolution of the law on self-determination — Right to self-determination has a broad scope of application as a fundamental human right — In these proceedings, the Court only to analyse that right in the context of decolonization — Right to self-determination enshrined by the Charter and reaffirmed by subsequent General Assembly resolutions — Resolution 1514 (XV) represents a defining moment in the consolidation of State practice on decolonization — Declaratory character of resolution 1514 (XV) with regard to the right to self-determination as a customary norm — Resolution 1514 (XV) provides that any disruption of the national unity and territorial integrity of a country is incompatible with the purposes and principles of the Charter — Reaffirmation of the right of all peoples to self-determination by the International Covenants on Civil and Political Rights and on Economic, Social and Cultural Rights — Right to self-determination reiterated in the Declaration on Principles of International Law concerning Friendly Relations and Co-operation among States —Means of implementing the right to self-determination in a non-self-governing territory set out in resolution 1541 (XV) — Exercise of self-determination must be the expression of the free and genuine will of the people concerned — Right to self-determination, under customary international law, does not impose a specific mechanism for its implementation in all instances — Right to self-determination of a people defined by reference to the entirety of a non-self-governing territory — Customary law character of the right to territorial integrity of a non-self-governing territory as a corollary of the right to self-determination — Incompatibility with the right to self-determination of any detachment by the administering Power of part of a non-self-governing territory, unless such detachment is based on the freely expressed and genuine will of the people of the territory concerned.

Right to self-determination, as a customary norm, constitutes the applicable international law during the relevant period.

Functions of the General Assembly with regard to decolonization.

Crucial role of the General Assembly with regard to decolonization — Monitoring of the means by which the free and genuine will of the people of a non-self-governing territory is expressed — General Assembly has consistently called upon administering Powers to respect the territorial integrity of non-self-governing territories.

Examination of the circumstances relating to the detachment of the Chagos Archipelago and its accordance with the applicable international law.

Agreement in principle of the Council of Ministers of Mauritius to the detachment of the Chagos Archipelago given when the colony of Mauritius was under the authority of the United Kingdom, its administering Power — Agreement not an international agreement — No free and genuine expression of the will of the people — Unlawful detachment of the Chagos Archipelago and its incorporation into a new colony, known as the BIOT.

Process of decolonization of Mauritius not lawfully completed when Mauritius acceded to independence in 1968.

* *

Consequences under international law arising from the continued administration by the United Kingdom of the Chagos Archipelago.

Decolonization of Mauritius not conducted in a manner consistent with the right of peoples to self-determination — United Kingdom's continued administration of the Chagos Archipelago constitutes a wrongful act entailing the international responsibility of that State — Continuing character of the unlawful act — United Kingdom under an obligation to bring an end to its administration of the Chagos Archipelago as rapidly as possible — Modalities for completing the decolonization of Mauritius to be determined by the General Assembly.

Obligation of all Member States to co-operate with the United Nations to put the modalities for completing the decolonization of Mauritius into effect — Resettlement on the Chagos Archipelago of Mauritian nationals, including those of Chagossian origin, is an issue relating to the protection of the human rights of those concerned — Issue should be addressed by the General Assembly during the completion of the decolonization of Mauritius.

ADVISORY OPINION

Present: *President* YUSUF; *Vice-President* XUE; *Judges* TOMKA, ABRAHAM, BENNOUNA, CANÇADO TRINDADE, DONOGHUE, GAJA, SEBUTINDE, BHANDARI, ROBINSON, GEVORGIAN, SALAM, IWASAWA; *Registrar* COUVREUR.

On the legal consequences of the separation of the Chagos Archipelago from Mauritius in 1965,

THE COURT,

composed as above,

gives the following Advisory Opinion:

1. The questions on which the advisory opinion of the Court has been requested are set forth in resolution 71/292 adopted by the General Assembly of the United Nations (hereinafter the "General Assembly") on 22 June 2017. By a letter dated 23 June 2017 and received in the Registry on 28 June 2017, the Secretary-General of the United Nations officially communicated to the Court the decision taken by the General Assembly to submit these questions for an advisory opinion. Certified true copies of the English and French texts of the resolution were enclosed with the letter. The resolution reads as follows:

"*The General Assembly*,

Reaffirming that all peoples have an inalienable right to the exercise of their sovereignty and the integrity of their national territory,

Recalling the Declaration on the Granting of Independence to Colonial Countries and Peoples, contained in its resolution 1514 (XV) of 14 December 1960, and in particular paragraph 6 thereof, which states that any attempt aimed at the partial or total disruption of the national unity and the territorial integrity of a country is incompatible with the purposes and principles of the Charter of the United Nations,

Recalling also its resolution 2066 (XX) of 16 December 1965, in which it invited the Government of the United Kingdom of Great Britain and Northern Ireland to take effective measures with a view to the immediate and full implementation of resolution 1514 (XV) and to take no action which would dismember the Territory of Mauritius and violate its territorial integrity, and its resolutions 2232 (XXI) of 20 December 1966 and 2357 (XXII) of 19 December 1967,

Bearing in mind its resolution 65/118 of 10 December 2010 on the fiftieth anniversary of the Declaration on the Granting of Independence to Colonial Countries and Peoples, reiterating its view that it is incumbent on the United Nations to continue to play an active role in the process of decolonization, and noting that the process of decolonization is not yet complete,

Recalling its resolution 65/119 of 10 December 2010, in which it declared the period 2011-2020 the Third International Decade for the Eradication of Colonialism, and its resolution 71/122 of 6 December 2016, in which it called for the immediate and full implementation of the Declaration on the Granting of Independence to Colonial Countries and Peoples,

Noting the resolutions on the Chagos Archipelago adopted by the Organization of African Unity and the African Union since 1980, most recently at the twenty-eighth ordinary session of the Assembly of the Union, held in Addis Ababa on 30 and 31 January 2017, and the resolutions on the Chagos Archipelago adopted by the Movement of Non-Aligned Countries since 1983, most recently at the Seventeenth Conference of Heads of State or Government of Non-Aligned Countries, held on Margarita Island, Bolivarian Republic of Venezuela, from 13 to 18 September 2016, and in particular the deep concern expressed therein at the forcible removal by the United Kingdom of Great Britain and Northern Ireland of all the inhabitants of the Chagos Archipelago,

Noting also its decision of 16 September 2016 to include in the agenda of its seventy-first session the item entitled 'Request for an advisory opinion of the International Court of Justice on the legal consequences of the separation of the Chagos Archipelago from Mauritius in 1965', on the understanding that there would be no consideration of this item before June 2017,

Decides, in accordance with Article 96 of the Charter of the United Nations, to request the International Court of Justice, pursuant to Article 65 of the Statute of the Court, to render an advisory opinion on the following questions:

(a) 'Was the process of decolonization of Mauritius lawfully completed when Mauritius was granted independence in 1968, following the separation of the Chagos Archipelago from Mauritius and having regard to international law, including obligations reflected in General Assembly resolutions 1514 (XV) of 14 December 1960, 2066 (XX) of 16 December 1965, 2232 (XXI) of 20 December 1966 and 2357 (XXII) of 19 December 1967?';

(b) 'What are the consequences under international law, including obligations reflected in the above-mentioned resolutions, arising from the continued administration by the United Kingdom of Great Britain and Northern Ireland of the Chagos Archipelago, including with respect to the inability of Mauritius to implement a programme for the resettlement on the Chagos Archipelago of its nationals, in particular those of Chagossian origin?'."

2. By letters dated 28 June 2017, the Registrar gave notice of the request for an advisory opinion to all States entitled to appear before the Court, pursuant to Article 66, paragraph 1, of the Statute.

3. By an Order dated 14 July 2017, the Court decided, in accordance with Article 66, paragraph 2, of the Statute, that the United Nations and its Member States were likely to be able to furnish information on the questions submitted to it for an advisory opinion, and fixed 30 January 2018 as the time-limit within which written statements might be submitted to it on those questions and 16 April 2018 as the time-limit within which States and organizations having presented a written statement might submit written comments on the other written statements.

4. By letters dated 18 July 2017, the Registrar informed the United Nations and its Member States of the Court's decisions and transmitted to them a copy of the Order.

5. Pursuant to Article 65, paragraph 2, of the Statute, the Secretary-General of the United Nations, under cover of a letter dated 30 November 2017 from the United Nations Legal Counsel, communicated to the Court a dossier of documents likely to throw light upon the questions formulated by the General Assembly, which was received in the Registry on 4 December 2017.

6. By a letter dated 10 January 2018 and received in the Registry the same day, the Legal Counsel of the African Union requested, first, that the African Union be permitted to furnish information, in writing and orally, on the questions submitted to the Court for an advisory opinion, and, secondly, that it be granted an extension of one month for the filing of its written statement.

7. By an Order dated 17 January 2018, the Court decided that the African Union was likely to be able to furnish information on the questions submitted to the Court for an advisory opinion and that it might do so within the time-limits fixed by the Court. By the same Order, the Court further decided to extend to 1 March 2018 the time-limit within which all written statements might be presented to the Court, in accordance with Article 66, paragraph 2, of the Statute, and to extend to 15 May 2018 the time-limit within which States and organizations having presented a written statement might submit written comments, in accordance with Article 66, paragraph 4, of the Statute.

8. By letters dated 17 January 2018, the Registrar informed the United Nations and its Member States, as well as the African Union, of the Court's decisions and transmitted to them a copy of the Order.

9. Within the time-limit thus extended by the Court in its Order of 17 January 2018, written statements were filed in the Registry, in order of their receipt, by Belize, Germany, Cyprus, Liechtenstein, Netherlands, United Kingdom of Great Britain and Northern Ireland, Serbia, France, Israel, Russian Federation, United States of America, Seychelles, Australia, India, Chile, Brazil, Republic of Korea, Madagascar, China, Djibouti, Mauritius, Nicaragua, the African Union, Guatemala, Argentina, Lesotho, Cuba, Viet Nam, South Africa, Marshall Islands and Namibia.

10. By a communication dated 5 March 2018, the Registry informed States having presented written statements, as well as the African Union, of the list of participants having filed written statements in the proceedings and explained that the Registry had set up a dedicated website from which those statements could be downloaded. By the same communication, the Registry further informed those States and the African Union that the Court had decided to hold hearings which would open on 3 September 2018.

11. On 14 March 2018, the Court decided, on an exceptional basis, to authorize the late filing of the written statement of the Republic of Niger.

12. On the same day, the Registrar informed the United Nations, and those of its Member States which had not presented written statements, that written statements had been filed in the Registry. By the same communication, the Registrar also indicated that the Court had decided to hold hearings which would open on 3 September 2018, during which oral statements and comments might be presented by the United Nations and its Member States, regardless of whether or not they had submitted written statements and, as the case may be, written comments.

13. On 15 March 2018, the Registrar communicated a full set of the written statements received in the Registry to all States having submitted written statements, as well as to the African Union.

14. By communications dated 26 March 2018, the United Nations and its Member States, as well as the African Union, were asked to inform the Registry, by 15 June 2018 at the latest, if they intended to take part in the oral proceedings.

15. Within the time-limit as extended by the Court in its Order of 17 January 2018, written comments were filed in the Registry, in order of their receipt, by the African Union, Serbia, Nicaragua, United Kingdom of Great Britain and Northern Ireland, Mauritius, Seychelles, Guatemala, Cyprus, Marshall Islands, United States of America and Argentina.

16. Upon receipt of those written comments, the Registrar, by communications dated 16 May 2018, informed States having presented written statements,

as well as the African Union, that written comments had been submitted and that those comments could be downloaded from a dedicated website.

17. On 22 May 2018, the Registrar transmitted a full set of the written comments to all States having submitted such comments, as well as to the African Union.

18. By letters dated 29 May 2018, the Registrar transmitted to the United Nations, and to all its Member States that had not participated in the written proceedings, a full set of the written statements and written comments filed in the Registry.

19. By letters dated 21 June 2018, the Registrar communicated to the United Nations and its Member States, as well as to the African Union, the list of participants in the oral proceedings and enclosed a detailed schedule of those proceedings.

20. By letters dated 26 June 2018, the Registrar informed Member States of the United Nations participating in the oral proceedings, as well as the African Union, of certain practical arrangements regarding the organization of those proceedings.

21. By a letter dated 2 July 2018, the Philippines informed the Court that it would no longer be making a statement during the oral proceedings. By letters dated 10 July 2018, the Registrar informed Member States of the United Nations participating in the oral proceedings and the African Union accordingly.

22. Pursuant to Article 106 of the Rules of Court, the Court decided to make the written statements and written comments submitted to it accessible to the public with effect from the opening of the oral proceedings.

23. In the course of the hearings held from 3 to 6 September 2018, the Court heard oral statements, in the following order, by:

for the Republic of Mauritius:

H.E. Sir Anerood Jugnauth, GCSK, KCMG, QC, Minister Mentor, Minister of Defence, Minister for Rodrigues of the Republic of Mauritius,
Mr. Pierre Klein, Professor at the Université libre de Bruxelles,
Ms Alison Macdonald, QC, Barrister at Matrix Chambers, London,
Mr. Paul S. Reichler, Attorney at Law, Foley Hoag LLP, member of the Bar of the District of Columbia,
Mr. Philippe Sands, QC, Professor of International Law at University College London, Barrister at Matrix Chambers, London;

for the United Kingdom of Great Britain and Northern Ireland:

Mr. Robert Buckland, QC, MP, Solicitor General,
Mr. Samuel Wordsworth, QC, member of the Bar of England and Wales, Essex Court Chambers,
Ms Philippa Webb, member of the Bar of England and Wales, 20 Essex Street Chambers,

	Sir Michael Wood, KCMG, member of the Bar of England and Wales, 20 Essex Street Chambers;
for the Republic of South Africa:	Ms J. G. S. de Wet, Chief State Law Adviser (International Law), Department of International Relations and Co-operation;
for the Federal Republic of Germany:	H.E. Mr. Christophe Eick, Ambassador, Legal Adviser, Federal Foreign Office, Berlin, Mr. Andreas Zimmermann, Professor of International Law, University of Potsdam;
for the Argentine Republic:	H.E. Mr. Mario Oyarzábal, Ambassador, Legal Adviser, Ministry of Foreign Affairs and Worship, Mr. Marcelo Kohen, Professor of International Law, Graduate Institute of International and Development Studies, Geneva, Member and Secretary-General of the Institut de droit international;
for Australia:	Mr. Bill Campbell, QC, Mr. Stephen Donaghue, QC, Solicitor General of Australia;
for Belize:	Mr. Ben Juratowitch, QC, Attorney at Law, Belize, and admitted to practice in England and Wales, and in Queensland, Australia, Freshfields Bruckhaus Deringer;
for the Republic of Botswana:	Mr. Chuchuchu Nchunga Nchunga, Deputy Government Attorney, Attorney General's Chambers, Botswana, Mr. Shotaro Hamamoto, Professor of International Law, Kyoto University, Japan;
for the Federative Republic of Brazil:	H.E. Ms Regina Maria Cordeiro Dunlop, Ambassador of the Federative Republic of Brazil to the Kingdom of the Netherlands;
for the Republic of Cyprus:	H.E. Mr. Costas Clerides, Attorney General of the Republic of Cyprus, Ms Mary-Ann Stavrinides, Attorney of the Republic, Law Office of the Republic of Cyprus, Mr. Polyvios G. Polyviou, Chryssafinis & Polyviou LLC;
for the United States of America:	Ms Jennifer G. Newstead, Legal Adviser, United States Department of State;
for the Republic of Guatemala:	Mr. Lesther Antonio Ortega Lemus, Minister Counsellor, Co-Representative of Guatemala, H.E. Ms Gladys Marithza Ruiz Sánchez De Vielman, Ambassador, Representative of Guatemala;

for the Republic of the Marshall Islands:	Mr. Caleb W. Christopher, Legal Adviser, Permanent Mission of the Republic of the Marshall Islands to the United Nations, New York;
for the Republic of India:	H.E. Mr. Venu Rajamony, Ambassador of India to the Kingdom of the Netherlands;
for the State of Israel:	Mr. Tal Becker, Legal Adviser, Ministry of Foreign Affairs, Mr. Roy Schöndorf, Deputy Attorney General (International Law), Ministry of Justice;
for the Republic of Kenya:	H.E. Mr. Lawrence Lenayapa, Ambassador of the Republic of Kenya to the Kingdom of the Netherlands, Ms Pauline Mcharo, Deputy Chief State Counsel, Office of the Attorney General of Kenya;
for the Republic of Nicaragua:	H.E. Mr. Carlos José Argüello Gómez, Ambassador of Nicaragua to the Kingdom of the Netherlands;
for the Federal Republic of Nigeria:	Mr. Dayo Apata, Solicitor General of the Federal Republic of Nigeria, Permanent Secretary, Federal Ministry of Justice;
for the Republic of Serbia:	Mr. Aleksandar Gajić, Chief Legal Counsel at the Ministry of Foreign Affairs;
for the Kingdom of Thailand:	H.E. Mr. Virachai Plasai, Ambassador of the Kingdom of Thailand to the United States of America;
for the Republic of Vanuatu:	Mr. Robert McCorquodale, Brick Court Chambers, member of the Bar of England and Wales, Ms Jennifer Robinson, Doughty Street Chambers, member of the Bar of England and Wales;
for the Republic of Zambia:	Mr. Likando Kalaluka, SC, Attorney General, Mr. Dapo Akande, Professor of Public International Law, University of Oxford;
for the African Union:	H.E. Ms Namira Negm, Ambassador, Legal Counsel of the African Union and Director of Legal Affairs Directorate, Mr. Mohamed Gomaa, Legal Counsellor and Arbitrator, Mr. Makane Moïse Mbengue, Professor of International Law, University of Geneva, and Affiliate Professor, Institut d'études politiques, Paris.

24. At the hearings, a Member of the Court put a question to Mauritius, which replied in writing, as requested, within the prescribed time-limit. The Court having decided that the other participants could submit comments or observations on the reply given by Mauritius, written comments were filed in the Registry, in order of their receipt, by the African Union, Argentina, United Kingdom of Great Britain and Northern Ireland and United States of America.

Another Member of the Court put a question to all the participants in the oral proceedings, to which Australia, Botswana and Vanuatu, Nicaragua, United Kingdom of Great Britain and Northern Ireland, Mauritius, Argentina, United States of America and Guatemala, in that order, replied in writing, as requested. The Court having decided that the other participants could submit comments or observations on the replies thus given, Mauritius, the African Union and United States of America submitted such comments or observations in writing.

* * *

I. Events Leading to the Adoption of the Request for the Advisory Opinion

25. Before examining the events leading to the adoption of the request for the advisory opinion, the Court recalls that the Republic of Mauritius consists of a group of islands in the Indian Ocean comprising approximately 1,950 sq km. The main island of Mauritius is located about 2,200 km south-west of the Chagos Archipelago, about 900 km east of Madagascar, about 1,820 km south of Seychelles and about 2,000 km off the eastern coast of the African continent.

26. The Chagos Archipelago consists of a number of islands and atolls. The largest island is Diego Garcia, located in the south-east of the archipelago. With an area of about 27 sq km, Diego Garcia accounts for more than half of the archipelago's total land area.

27. Although Mauritius was occupied by the Dutch from 1638 to 1710, the first colonial administration of Mauritius was established in 1715 by France which named it *Ile de France*. In 1810, the British captured *Ile de France* and renamed it Mauritius. By the Treaty of Paris of 1814, France ceded Mauritius and all its dependencies to the United Kingdom.

28. Between 1814 and 1965, the Chagos Archipelago was administered by the United Kingdom as a dependency of the colony of Mauritius. From as early as 1826, the islands of the Chagos Archipelago were listed by Governor Lowry-Cole as dependencies of Mauritius. The islands were also described in several ordinances, including those made by Governors of Mauritius in 1852 and 1872, as dependencies of Mauritius. The Mauritius Constitution Order of 26 February 1964 (hereinafter the "1964 Mauritius Constitution Order"), promulgated by the United Kingdom Government, defined the colony of Mauritius in Section 90 (1) as "the island of Mauritius and the Dependencies of Mauritius".

29. In accordance with General Assembly resolution 66 (I) of 14 December 1946, the United Kingdom as the administering Power regularly transmitted information to the General Assembly under Article 73 *(e)* of the Charter of the United Nations concerning Mauritius as

a non-self-governing territory. The information submitted by the United Kingdom was included in several reports of the Fourth Committee (Special Political and Decolonization Committee) of the General Assembly. In many of these reports, the islands of the Chagos Archipelago, and sometimes the Chagos Archipelago itself, are referred to as dependencies of Mauritius. In its 1947 Report, Mauritius is described as comprising the island of Mauritius and its dependencies among which are mentioned the island of Rodriguez and the Oil Islands group of which the principal island is Diego Garcia. The Report of 1948 collectively referred to all of the islands as "Mauritius". The Report of 1949 states that "there are dependent upon Mauritius a number of islands scattered over the Indian Ocean, of which the most important is Rodriguez . . . Other dependencies are: Chagos Archipelago . . . Agalega and Cargados Charajos".

30. On 14 December 1960, the General Assembly adopted resolution 1514 (XV) entitled "Declaration on the Granting of Independence to Colonial Countries and Peoples" (hereinafter "resolution 1514 (XV)"). On 27 November 1961, the General Assembly, by resolution 1654 (XVI), established the United Nations Special Committee on Decolonization (hereinafter the "Committee of Twenty-Four") to monitor the implementation of resolution 1514 (XV).

31. In February 1964, discussions commenced between the United States of America (hereinafter the "United States") and the United Kingdom regarding the use by the United States of certain British-owned islands in the Indian Ocean. The United States expressed an interest in establishing military facilities on the island of Diego Garcia.

32. On 29 June 1964, the United Kingdom also commenced talks with the Premier of the colony of Mauritius regarding the detachment of the Chagos Archipelago from Mauritius. At Lancaster House, talks between representatives of the colony of Mauritius and the United Kingdom Government led to the conclusion on 23 September 1965 of an agreement (hereinafter the "Lancaster House agreement", described in more detail in paragraph 108 below).

33. On 8 November 1965, by the British Indian Ocean Territory Order 1965, the United Kingdom established a new colony known as the British Indian Ocean Territory (hereinafter the "BIOT") consisting of the Chagos Archipelago, detached from Mauritius, and the Aldabra, Farquhar and Desroches Islands, detached from Seychelles.

34. On 16 December 1965, the General Assembly adopted resolution 2066 (XX) on the "Question of Mauritius", in which it expressed deep concern about the detachment of certain islands from the territory of Mauritius for the purpose of establishing a military base and invited the "administering Power to take no action which would dismember the Territory of Mauritius and violate its territorial integrity".

35. On 20 December 1966, the General Assembly adopted resolution 2232 (XXI) on a number of territories including Mauritius. The resolution reiterated that

"any attempt aimed at the partial or total disruption of the national unity and the territorial integrity of colonial Territories and the establishment of military bases and installations in these Territories is incompatible with the purposes and principles of the Charter of the United Nations and of General Assembly resolution 1514 (XV)".

36. The talks between the United Kingdom and the United States resulted in the conclusion on 30 December 1966 of the "Agreement concerning the Availability for Defence Purposes of the British Indian Ocean Territory" and the conclusion of an Agreed Minute of the same date.

37. Based on the 1966 Agreement, the United States and the United Kingdom agreed that the Government of the United Kingdom would take any "administrative measures" necessary to ensure that their defence needs were met. The Agreed Minute provided that, among the administrative measures to be taken, was "resettling any inhabitants" of the islands. The inhabitants of the Chagos Archipelago are referred to as Chagossians and, sometimes, as the "Ilois" or "islanders". In this Opinion these terms are used interchangeably.

38. On 10 May 1967, Sub-Committee I of the Committee of Twenty-Four reported that:

"By creating a new territory, the British Indian Ocean Territory, composed of islands detached from Mauritius and Seychelles, the administering Power continues to violate the territorial integrity of these Non-Self Governing Territories and to defy resolutions 2066 (XX) and 2232 (XXI) of the General Assembly."

39. On 15, 17 and 19 June 1967, the Committee of Twenty-Four examined the Report of Sub-Committee I and adopted a resolution on Mauritius. In this resolution, the Committee

"[d]eplores the dismemberment of Mauritius and Seychelles by the administering Power which violates their territorial integrity, in contravention of General Assembly resolutions 2066 (XX) and 2232 (XXI) and calls upon the administering Power to return to these Territories the islands detached therefrom".

40. On 7 August 1967, general elections were held in Mauritius and the political parties in favour of independence prevailed.

41. On 19 December 1967, the General Assembly adopted resolution 2357 (XXII) on a number of territories including Mauritius, and reaffirmed what it had declared in resolution 2232 (XXI) (see paragraph 35 above).

42. On 12 March 1968, Mauritius became an independent State and on 26 April 1968 was admitted to membership in the United Nations. Sir Seewoosagur Ramgoolam became the first Prime Minister of the Republic of Mauritius. Section 111, paragraph 1, of the 1968 Constitution of Mauritius, promulgated by the United Kingdom Government before independence on 4 March 1968, defined Mauritius as "the territo-

ries which immediately before 12th March 1968 constituted the colony of Mauritius". This definition did not include the Chagos Archipelago in the territory of Mauritius.

43. Between 1967 and 1973, the entire population of the Chagos Archipelago was either prevented from returning or forcibly removed and prevented from returning by the United Kingdom. The main forcible removal of Diego Garcia's population took place in July and September 1971.

44. On 11 April 1979, in a discussion on the detachment of the Chagos Archipelago, Prime Minister Ramgoolam told the Mauritian Parliament "we had no choice".

45. In July 1980, the Organization of African Unity (hereinafter the "OAU") adopted resolution 99 (XVII) (1980) in which it "demands" that Diego Garcia be "unconditionally returned to Mauritius".

46. On 9 October 1980, the Mauritian Prime Minister, at the thirty-fifth session of the United Nations General Assembly, stated that the BIOT should be disbanded and the territory restored to Mauritius as part of its natural heritage.

47. In July 2000, the OAU adopted Decision AHG/Dec.159 (XXXVI) (2000) expressing its concern that the Chagos Archipelago was "excised by the colonial power from Mauritius prior to its independence in violation of UN Resolution 1514".

48. On 1 April 2010, the United Kingdom announced the creation of a marine protected area in and around the Chagos Archipelago. On 20 December 2010, Mauritius instituted proceedings against the United Kingdom pursuant to Article 287 of the United Nations Convention on the Law of the Sea (hereinafter "UNCLOS" or "the Convention") before an Arbitral Tribunal constituted under Annex VII of the Convention, challenging the creation of a marine protected area by the United Kingdom. In those proceedings, Mauritius submitted, *inter alia*, that (1) the United Kingdom was not entitled to declare a marine protected area or other maritime zones in and around the Chagos Archipelago as it was not a coastal State within the meaning of UNCLOS; (2) the United Kingdom was not entitled to declare unilaterally a marine protected area or other maritime zones because Mauritius had rights as a coastal State within the meaning of Articles 56, paragraph 1, and 76, paragraph 8, of UNCLOS; (3) the United Kingdom should not take any steps to prevent the Commission on the Limits of the Continental Shelf from making recommendations to Mauritius in respect of any submission that Mauritius may make to that Commission regarding the Chagos Archipelago; and (4) the marine protected area was incompatible with the United Kingdom's obligations under UNCLOS.

49. On 27 July 2010, the African Union adopted Decision 331 (2010), in which it stated that the Chagos Archipelago, including Diego Garcia, was detached "by the former colonial power from the territory of Mauri-

tius in violation of [General Assembly] Resolutions 1514 (XV) of 14 December 1960 and 2066 (XX) of 16 December 1965 which prohibit colonial powers from dismembering colonial territories prior to granting independence".

50. On 18 March 2015, the Arbitral Tribunal constituted under Annex VII of UNCLOS rendered an award in the *Arbitration regarding the Chagos Marine Protected Area between Mauritius and the United Kingdom* (hereinafter the *"Arbitration regarding the Chagos Marine Protected Area"*). The Tribunal found, in its Award, that it lacked jurisdiction on Mauritius' first, second and third submissions, but had jurisdiction to consider Mauritius' fourth submission. With respect to the first submission, the Tribunal observed that "[t]he parties' dispute regarding sovereignty over the Chagos Archipelago does not concern interpretation or application" of UNCLOS. On the merits, the Arbitral Tribunal found, *inter alia*, that, in establishing the marine protected area surrounding the Chagos Archipelago, the United Kingdom had breached its obligations under Article 2, paragraph 3, Article 56, paragraph 2, and Article 194, paragraph 4, of the Convention, and that the United Kingdom's undertaking to return the Chagos Archipelago to Mauritius, when no longer needed for defence purposes, was legally binding.

51. On 30 December 2016, the 50-year period covered by the 1966 Agreement came to an end; however, it was extended for a further period of twenty years, in accordance with its terms.

52. On 30 January 2017, the Assembly of the African Union adopted resolution AU/Res.1 (XXVIII) on the Chagos Archipelago which resolved, among other things, to support Mauritius with a view to ensuring "the completion of the decolonization of the Republic of Mauritius".

53. On 23 June 2017, the General Assembly adopted resolution 71/292 requesting an advisory opinion from the Court (see paragraph 1 above). Having recalled the events leading to the adoption of that request, the Court now turns to the consideration of the questions of jurisdiction and discretion.

II. JURISDICTION AND DISCRETION

54. When the Court is seised of a request for an advisory opinion, it must first consider whether it has jurisdiction to give the opinion requested and if so, whether there is any reason why the Court should, in the exercise of its discretion, decline to answer the request (see *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996 (I)*, p. 232, para. 10; *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, Advisory Opinion, I.C.J. Reports 2004 (I)*, p. 144, para. 13; *Accordance with International Law of the Unilateral Declaration of Independence in Respect of Kosovo, Advisory Opinion, I.C.J. Reports 2010 (II)*, p. 412, para. 17).

A. Jurisdiction

55. The Court's jurisdiction to give an advisory opinion is based on Article 65, paragraph 1, of its Statute which provides that "[t]he Court may give an advisory opinion on any legal question at the request of whatever body may be authorized by or in accordance with the Charter of the United Nations to make such a request".

56. The Court notes that the General Assembly is competent to request an advisory opinion by virtue of Article 96, paragraph 1, of the Charter, which provides that "[t]he General Assembly . . . may request the International Court of Justice to give an advisory opinion on any legal question".

57. The Court now turns to the requirement in Article 96 of the Charter and Article 65 of its Statute that the advisory opinion must be on a "legal question".

58. In the present proceedings, the first question put to the Court is whether the process of decolonization of Mauritius was lawfully completed having regard to international law when it was granted independence following the separation of the Chagos Archipelago. The second question relates to the consequences arising under international law from the continued administration by the United Kingdom of the Chagos Archipelago. The Court considers that a request from the General Assembly for an advisory opinion to examine a situation by reference to international law concerns a legal question.

59. The Court therefore concludes that the request has been made in accordance with the Charter and that the two questions submitted to it are legal in character.

60. One of the participants in the present proceedings has argued that the Court lacks jurisdiction because the questions asked "ostensibly relate to one topic, but . . . in fact relate to a different topic". Moreover, it contended that there is no "exact statement of the question upon which an opinion is required" within the meaning of Article 65, paragraph 2, of the Statute. According to the same participant, the questions put to the Court do not reflect the real issues, which relate to sovereignty rather than decolonization.

61. The Court is of the view that the arguments raised in these proceedings in relation to Article 65, paragraph 2, of its Statute do not deprive it of jurisdiction to render the advisory opinion. When faced with similar arguments in its Advisory Opinion on the *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*, the Court observed that "lack of clarity in the drafting of a question does not deprive the Court of jurisdiction. Rather, such uncertainty will require clarification in interpretation, and such necessary clarifications of interpretation have frequently been given by the Court." (*Advisory Opinion, I.C.J. Reports 2004 (I)*, pp. 153-154, para. 38.) The Court will examine these arguments in paragraphs 135 to 137 below.

62. The Court accordingly has jurisdiction to give the advisory opinion requested by resolution 71/292 of the General Assembly.

B. Discretion

63. The fact that the Court has jurisdiction does not mean, however, that it is obliged to exercise it:

> "The Court has recalled many times in the past that Article 65, paragraph 1, of its Statute, which provides that 'The Court may give an advisory opinion . . .', should be interpreted to mean that the Court has a discretionary power to decline to give an advisory opinion even if the conditions of jurisdiction are met." (*Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, Advisory Opinion, I.C.J. Reports 2004 (I)*, p. 156, para. 44; *Accordance with International Law of the Unilateral Declaration of Independence in Respect of Kosovo, Advisory Opinion, I.C.J. Reports 2010 (II)*, pp. 415-416, para. 29.)

64. The discretion whether or not to respond to a request for an advisory opinion exists so as to protect the integrity of the Court's judicial function as the principal judicial organ of the United Nations (*Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, Advisory Opinion, I.C.J. Reports 2004 (I)*, pp. 156-157, paras. 44-45; *Accordance with International Law of the Unilateral Declaration of Independence in Respect of Kosovo, Advisory Opinion, I.C.J. Reports 2010 (II)*, pp. 415-416, para. 29).

65. The Court is, nevertheless, mindful of the fact that its answer to a request for an advisory opinion "represents its participation in the activities of the Organization, and, in principle, should not be refused" (*Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, First Phase, Advisory Opinion, I.C.J. Reports 1950*, p. 71; *Difference Relating to Immunity from Legal Process of a Special Rapporteur of the Commission on Human Rights, Advisory Opinion, I.C.J. Reports 1999 (I)*, pp. 78-79, para. 29; *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, Advisory Opinion, I.C.J. Reports 2004 (I)*, p. 156, para. 44). Thus, the consistent jurisprudence of the Court is that only "compelling reasons" may lead the Court to refuse its opinion in response to a request falling within its jurisdiction (*Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, Advisory Opinion, I.C.J. Reports 2004 (I)*, p. 156, para. 44; *Accordance with International Law of the Unilateral Declaration of Independence in Respect of Kosovo, Advisory Opinion, I.C.J. Reports 2010 (II)*, p. 416, para. 30).

66. The Court must satisfy itself as to the propriety of the exercise of its judicial function in the present proceedings. It will therefore give careful consideration as to whether there are compelling reasons for it to decline to respond to the request from the General Assembly.

67. Some participants in the present proceedings have argued that there are "compelling reasons" for the Court to exercise its discretion to decline to give the advisory opinion requested. Among the reasons raised by these participants are that, first, advisory proceedings are not suitable for determination of complex and disputed factual issues; secondly, the Court's response would not assist the General Assembly in the performance of its functions; thirdly, it would be inappropriate for the Court to re-examine a question already settled by the Arbitral Tribunal constituted under Annex VII of UNCLOS in the *Arbitration regarding the Chagos Marine Protected Area*; and fourthly, the questions asked in the present proceedings relate to a pending bilateral dispute between two States which have not consented to the settlement of that dispute by the Court.

68. The Court will now turn to the examination of these arguments.

1. Whether advisory proceedings are suitable for determination of complex and disputed factual issues

69. It has been argued by some participants that the questions raise complex and disputed factual issues which are not suitable for determination in advisory proceedings. Those participants have contended that in these proceedings the Court does not have sufficient information and evidence to arrive at a conclusion on the complex and disputed questions of fact before it.

70. Other participants have maintained that the factual issues before the Court are not complex and that what really matters is the Court's interpretation of those facts.

71. The Court recalls that in its Advisory Opinion on *Western Sahara* when it was faced with the same argument, it concluded that what was decisive was whether it had

> "sufficient information and evidence to enable it to arrive at a judicial conclusion upon any disputed questions of fact the determination of which is necessary for it to give an opinion in conditions compatible with its judicial character" (*I.C.J. Reports 1975*, pp. 28-29, para. 46).

72. Moreover, the Court recalls that, in its Advisory Opinion on *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)*, it held that

> "to enable [it] to pronounce on legal questions, it must also be acquainted with, take into account and, if necessary, make findings as to the relevant factual issues" (*I.C.J. Reports 1971*, p. 27, para. 40).

73. The Court observes that an abundance of material has been presented before it including a voluminous dossier from the United Nations. Moreover, many participants have submitted written statements and

written comments and made oral statements which contain information relevant to answering the questions. Thirty-one States and the African Union filed written statements, ten of those States and the African Union submitted written comments thereon, and twenty-two States and the African Union made oral statements. The Court notes that information provided by participants includes the various official records from the 1960s, such as those from the United Kingdom concerning the detachment of the Chagos Archipelago and the accession of Mauritius to independence.

74. The Court is therefore satisfied that there is in the present proceedings sufficient information on the facts before it for the Court to give the requested opinion. Accordingly, the Court cannot decline to answer the questions put to it.

2. Whether the Court's response would assist the General Assembly in the performance of its functions

75. It has been argued by some participants that the advisory opinion requested would not assist the General Assembly in the proper exercise of its functions. These participants have maintained that the General Assembly has not been actively engaged in the decolonization of Mauritius since 1968. In particular, they have asserted that, after Mauritius became independent in March 1968, it was removed from the list of territories being monitored by the Committee of Twenty-Four and that the Chagos Archipelago was never added to that list. Other participants have argued that the Court's response would be useful to the General Assembly, which continued to be active after 1968 in considering the question of Mauritius and the detachment of the Chagos Archipelago.

76. The Court considers that it is not for the Court itself to determine the usefulness of its response to the requesting organ. Rather, it should be left to the requesting organ, the General Assembly, to determine "whether it needs the opinion for the proper performance of its functions" (*Accordance with International Law of the Unilateral Declaration of Independence in Respect of Kosovo, Advisory Opinion, I.C.J. Reports 2010 (II)*, p. 417, para. 34). The Court recalls that, in its Advisory Opinion on *Legality of the Threat or Use of Nuclear Weapons*, it did not accept an argument that the Court should refuse to respond to the General Assembly's request on the ground that the General Assembly had not explained to the Court the purposes for which it sought an opinion. The Court observed that:

> "it is not for the Court itself to purport to decide whether or not an advisory opinion is needed by the Assembly for the performance of its functions. The General Assembly has the right to decide for itself on the usefulness of an opinion in the light of its own needs." (*I.C.J. Reports 1996 (I)*, p. 237, para. 16.)

77. In the Advisory Opinion on *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*, the Court stated that it "cannot substitute its assessment of the usefulness of the opinion requested for that of the organ that seeks such opinion" (*I.C.J. Reports 2004 (I)*, p. 163, para. 62). The Court recalls that "[i]n any event, to what extent or degree its opinion will have an impact on the action of the General Assembly is not for the Court to decide" (*Western Sahara, Advisory Opinion, I.C.J. Reports 1975*, p. 37, para. 73).

78. It follows that in the present proceedings the Court cannot decline to answer the questions posed to it by the General Assembly in resolution 71/292 on the ground that its opinion would not assist the General Assembly in the performance of its functions.

3. Whether it would be appropriate for the Court to re-examine a question allegedly settled by the Arbitral Tribunal constituted under UNCLOS Annex VII in the Arbitration regarding the Chagos Marine Protected Area

79. Certain participants have argued that an advisory opinion by the Court would reopen the findings of the Arbitral Tribunal in the *Arbitration regarding the Chagos Marine Protected Area* that are binding on Mauritius and the United Kingdom.

80. Other participants have contended that *res judicata* does not apply in these proceedings because the same parties are not seeking to litigate the same issue that has already been definitively settled between them in an earlier case.

81. The Court recalls that its opinion "is given not to States, but to the organ which is entitled to request it" (*Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, First Phase, Advisory Opinion, I.C.J. Reports 1950*, p. 71). The Court observes that the principle of *res judicata* does not preclude it from rendering an advisory opinion. When answering a question submitted for an opinion, the Court will consider any relevant judicial or arbitral decision. In any event, the Court further notes that the issues that were determined by the Arbitral Tribunal in the *Arbitration regarding the Chagos Marine Protected Area* (see paragraph 50 above) are not the same as those that are before the Court in these proceedings.

82. It follows from the foregoing that the Court cannot decline to answer the questions on this ground.

4. Whether the questions asked relate to a pending dispute between two States, which have not consented to its settlement by the Court

83. Some participants have argued that there is a bilateral dispute between Mauritius and the United Kingdom regarding sovereignty over the Chagos Archipelago and that this dispute is at the core of the advisory proceedings. According to those participants, to determine the issues in

the present proceedings, the Court would be required to arrive at conclusions on certain key points such as the effect of the 1965 Lancaster House agreement. Certain participants have contended that the dispute over sovereignty, which arose in the 1980s in bilateral relations, is the "real dispute" that motivates the request. These participants have further contended that Mauritius' claims in the *Arbitration regarding the Chagos Marine Protected Area* revealed the existence of a bilateral territorial dispute between that State and the United Kingdom. Therefore, to render an advisory opinion would contravene "the principle that a State is not obliged to allow its disputes to be submitted to judicial settlement without its consent" (*Western Sahara, Advisory Opinion, I.C.J. Reports 1975*, pp. 24-25, paras. 32-33; *Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, First Phase, Advisory Opinion, I.C.J. Reports 1950*, p. 71).

84. Other participants have maintained that there is no territorial dispute between the United Kingdom and Mauritius that would prevent the Court from giving the advisory opinion requested. In particular, they have argued that the questions put to the Court by the General Assembly concern issues located in a broader frame of reference, that is, the law of decolonization and the exercise of the right to self-determination. Some participants have argued that the dispute between Mauritius and the United Kingdom relating to territorial sovereignty over the Chagos Archipelago could neither have arisen independently nor could it be detached from the question of decolonization. Other participants have contended that the United Kingdom, having undertaken in 1965 to return the Chagos Archipelago to Mauritius once it was no longer needed for defence purposes, recognized that the archipelago belonged to Mauritius, and accordingly there could be no territorial dispute.

85. The Court recalls that there would be a compelling reason for it to decline to give an advisory opinion when such a reply "would have the effect of circumventing the principle that a State is not obliged to allow its disputes to be submitted to judicial settlement without its consent" (*Western Sahara, Advisory Opinion, I.C.J. Reports 1975*, p. 25, para. 33).

86. The Court notes that the questions put to it by the General Assembly relate to the decolonization of Mauritius. The General Assembly has not sought the Court's opinion to resolve a territorial dispute between two States. Rather, the purpose of the request is for the General Assembly to receive the Court's assistance so that it may be guided in the discharge of its functions relating to the decolonization of Mauritius. The Court has emphasized that it may be in the interest of the General Assembly to seek an advisory opinion which it deems of assistance in carrying out its functions in regard to decolonization:

> "The object of the General Assembly has not been to bring before the Court, by way of a request for advisory opinion, a dispute or legal controversy, in order that it may later, on the basis of the Court's opinion, exercise its powers and functions for the peaceful settlement of that dispute or controversy. The object of the request is an entirely

> different one: to obtain from the Court an opinion which the General Assembly deems of assistance to it for the proper exercise of its functions concerning the decolonization of the territory." (*Western Sahara, Advisory Opinion, I.C.J Reports 1975*, pp. 26-27, para. 39.)

87. The Court observes that the General Assembly has a long and consistent record in seeking to bring colonialism to an end. From the earliest days of the United Nations, the General Assembly has played an active role in matters of decolonization. Article 1, paragraph 2, of the Charter establishes, as one of the purposes of the United Nations, respect for the principle of equal rights and self-determination of peoples. In this regard, the Court notes that Chapter XI of the Charter of the United Nations relates to non-self-governing territories and that the first article in that Chapter, Article 73, provides that administering powers of non-self-governing territories are required, *inter alia*, to "transmit regularly to the Secretary-General for information purposes . . . statistical and other information of a technical nature relating to economic, social, and educational conditions in the territories for which they are respectively responsible". This information was considered by the Fourth Committee (Special Political and Decolonization Committee) of the General Assembly and included in its reports. The work of the Committee continued until 1961 when the Committee of Twenty-Four was established.

88. The Court therefore concludes that the opinion has been requested on the matter of decolonization which is of particular concern to the United Nations. The issues raised by the request are located in the broader frame of reference of decolonization, including the General Assembly's role therein, from which those issues are inseparable (*Western Sahara, Advisory Opinion, I.C.J. Reports 1975*, p. 26, para. 38; *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, Advisory Opinion, I.C.J. Reports 2004 (I)*, p. 159, para. 50).

89. Moreover, the Court observes that there may be differences of views on legal questions in advisory proceedings (*Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971*, p. 24, para. 34). However, the fact that the Court may have to pronounce on legal issues on which divergent views have been expressed by Mauritius and the United Kingdom does not mean that, by replying to the request, the Court is dealing with a bilateral dispute.

90. In these circumstances, the Court does not consider that to give the opinion requested would have the effect of circumventing the principle of consent by a State to the judicial settlement of its dispute with another State. The Court therefore cannot, in the exercise of its discretion, decline to give the opinion on that ground.

91. In light of the foregoing, the Court concludes that there are no compelling reasons for it to decline to give the opinion requested by the General Assembly.

III. THE FACTUAL CONTEXT OF THE SEPARATION OF THE CHAGOS ARCHIPELAGO FROM MAURITIUS

92. The Court notes that the questions submitted to it by the General Assembly relate to the separation of the Chagos Archipelago from Mauritius and the legal consequences arising from the continued administration by the United Kingdom of the Chagos Archipelago (see paragraph 1 above). Before addressing these questions, the Court deems it important to examine the factual circumstances surrounding the separation of the archipelago from Mauritius, as well as those relating to the removal of the Chagossians from this territory.

93. In this regard, the Court notes that, prior to the separation of the Chagos Archipelago from Mauritius, there were formal discussions between the United Kingdom and the United States and between the Government of the United Kingdom and the representatives of the colony of Mauritius.

A. The Discussions between the United Kingdom and the United States with respect to the Chagos Archipelago

94. In February 1964, talks commenced between the Governments of the United Kingdom and the United States on the "strategic use of certain small British-owned islands in the Indian Ocean" for defence purposes. During these talks, the United States expressed an interest in establishing a military communication facility on Diego Garcia. At the end of the talks, it was agreed that the United Kingdom delegation would recommend to its Government that it should be responsible for acquiring land, resettling the population and providing compensation at the United Kingdom Government's expense; that the Government of the United States would be responsible for construction and maintenance costs and that the United Kingdom Government would assess quickly the feasibility of the transfer of the administration of Diego Garcia and the other islands of the Chagos Archipelago from Mauritius.

95. According to a memorandum of the United Kingdom Foreign Office, the United Kingdom was of the view that the course of action that would best satisfy its major interests would appear to be to detach Diego Garcia and other islands in the Chagos Archipelago from Mauritius prior to the latter's independence, and to place these islands under the direct administration of the United Kingdom, and that this action could be done by Order in Council. The United Kingdom considered that it had the constitutional power to take such action without the consent of Mauritius, but that such an approach would expose it to criticism in the United Nations. The same document also indicated that such criticism would lose most of its force if prior acceptance by the Mauritian Ministers of the detachment was obtained by the United Kingdom, whether such acceptance was obtained by positive consent or by acquiescence. The document further stated that it would best suit the interests of the

United Kingdom if the detachment of the Chagos Archipelago was presented to Mauritius as "a *fait accompli*" or at most if Mauritius was told of the United Kingdom's plans "at the last moment".

96. According to a declassified internal United Kingdom document dated 23 and 24 September 1965 (Record of UK-US Talks on Defence Facilities in the Indian Ocean, United Kingdom, FO 371/184529), the Governments of the United Kingdom and the United States considered that, rather than detaching the islands of the Chagos Archipelago from Mauritius and the islands of Aldabra, Farquhar and Desroches from Seychelles in two separate operations, their interests would be better served by carrying out the detachment "as a single operation" in order to avoid "a second row" in the United Nations. According to the same document, during the talks, the United Kingdom explained to the United States that the detachment of the Chagos Archipelago from Mauritius would take place in three stages; in the final stage it was envisaged that, when the defence facilities were installed on an island, "it would be free from local civilian inhabitants".

97. The discussions between the United Kingdom and the United States led to the conclusion of the 1966 Agreement for the establishment of a military base by the United States on the Chagos Archipelago (see paragraph 36 above).

B. The Discussions between the Government of the United Kingdom and the Representatives of the Colony of Mauritius with respect to the Chagos Archipelago

98. The 1964 Mauritius Constitution Order, promulgated by the United Kingdom Government, established a Legislative Assembly consisting of 40 elected members, the Speaker and the Chief Secretary *ex officio* and up to 15 members nominated by the Governor. The nominated members of the Legislative Assembly held office at the pleasure of the Governor. There was established a Council of Ministers for Mauritius consisting of 10 to 13 appointed members, the Chief Secretary of Mauritius and the Premier of Mauritius; and temporary members who could replace an appointed member who was ill or absent from the island of Mauritius. The members of the Council were appointed by the Governor, after consultation with the Premier. They had to be members of the Legislative Assembly. In the discussions between the Government of the United Kingdom and the representatives of the colony of Mauritius, the latter was represented by the Premier of Mauritius, or by the Premier and other members of the Council of Ministers.

99. In 1964, the Committee of Twenty-Four reported that the Constitution of Mauritius did not allow the representatives of the people to exercise real powers, and that authority was virtually all concentrated in the hands of the United Kingdom Government (see paragraph 172 below).

100. On 29 June 1964, Mr. John Rennie, the Governor of Mauritius, discussed with Sir Seewoosagur Ramgoolam, the Premier of Mauritius, the idea of detaching the Chagos Archipelago from Mauritius. Although he was favourably disposed to providing "facilities", the Premier indicated that he preferred a long-term lease rather than detachment.

101. On 19 July 1965, the Governor of Mauritius was instructed by the Colonial Office to inform the Mauritian Council of Ministers of the proposal to detach the Chagos Archipelago by constitutionally separating it from Mauritius. On 30 July 1965, the Governor of Mauritius informed the Colonial Office that the Council of Ministers opposed the detachment because of the negative public reaction that it would receive in Mauritius. The Governor indicated that the Council of Ministers expressed a preference for a long-term lease of the islands, while the United Kingdom indicated that a lease was not acceptable.

102. On 3 September 1965, Sir Seewoosagur Ramgoolam and Sir Anthony Greenwood, the United Kingdom's Secretary of State for the Colonies, met in London prior to the start of the Fourth Constitutional Conference and agreed that the discussion on the detachment and the constitutional conference should be kept separate. However, it appears that this approach was later modified to link both matters in a possible package deal.

103. On 7 September 1965, the Fourth Constitutional Conference commenced in London and ended on 24 September 1965. Previous constitutional conferences were held in July 1955, February 1957 and June 1961. During the Fourth Constitutional Conference, there were several private meetings on defence matters. The first meeting on 13 September 1965 was attended by Sir Seewoosagur Ramgoolam, Sir Anthony Greenwood, and Mr. John Rennie. At the meeting, the Premier stated that Mauritius preferred a lease rather than a detachment of the Chagos Archipelago. Following the meeting, the United Kingdom Foreign Secretary and the Defence Secretary concluded that if Mauritius would not agree to the detachment, they would have to "adopt the Foreign Office and Ministry of Defence recommendation of 'forcible detachment and compensation paid into a fund'".

104. On 20 September 1965, during a meeting on defence matters chaired by the United Kingdom Secretary of State, the Premier of Mauritius again stated that "the Mauritius Government was not interested in the excision of the islands and would stand out for a 99-year lease". As an alternative, the Premier of Mauritius proposed that the United Kingdom first concede independence to Mauritius and thereafter allow the Mauritian Government to negotiate with the Governments of the United Kingdom and the United States on the question of Diego Garcia. During those discussions, the Secretary of State indicated that a lease would not be acceptable to the United States and that the Chagos Archipelago would have to be made available on the basis of its detachment.

105. On 22 September 1965, a Note was prepared by Sir Oliver Wright, Private Secretary to the United Kingdom's Prime Minister, Sir Harold Wilson. It read:

> "Sir Seewoosagur Ramgoolam is coming to see you at 10:00 tomorrow morning. The object is to frighten him with hope: hope that he might get independence; Fright lest he might not unless he is sensible about the detachment of the Chagos Archipelago. I attach a brief prepared by the Colonial Office, with which the Ministry of Defence and the Foreign Office are on the whole content. The key sentence in the brief is the last sentence of it on page three."

106. The key last sentence referred to above read:

> "The Prime Minister may therefore wish to make some oblique reference to the fact that H.M.G. have the legal right to detach Chagos by Order in Council, *without* Mauritius consent but this would be a grave step." (Emphasis in the original.)

107. On 23 September 1965 two events took place. The first event was a meeting in the morning of 23 September 1965 between Prime Minister Wilson and Premier Ramgoolam. Sir Oliver Wright's Report on the meeting indicated that Prime Minister Wilson told Premier Ramgoolam that

> "in theory there were a number of possibilities. The Premier and his colleagues could return to Mauritius either with Independence or without it. On the defence point, Diego Garcia could either be detached by order in Council or with the agreement of the Premier and his colleagues. The best solution of all might be Independence and detachment by agreement, although he could not of course commit the Colonial Secretary at this point."

108. The second event on the same day was a meeting on defence matters held at Lancaster House between Premier Ramgoolam, three other Mauritian Ministers and the United Kingdom Secretary of State. At the end of that meeting, the United Kingdom Secretary of State enquired whether the Mauritian Ministers could agree to the detachment of the Chagos Archipelago on the basis of undertakings that he would recommend to the Cabinet. The undertakings in the Lancaster House agreement, contained in paragraph 22 of the Record of the Meeting of 23 September 1965, were:

> "(i) negotiations for a defence agreement between Britain and Mauritius;
>
> (ii) in the event of independence an understanding between the two governments that they would consult together in the event of a difficult internal security situation arising in Mauritius;

(iii) compensation totalling up to £3[million] should be paid to the Mauritius Government over and above direct compensation to landowners and the cost of resettling others affected in the Chagos Islands;

(iv) the British Government would use their good offices with the United States Government in support of Mauritius' request for concessions over sugar imports and the supply of wheat and other commodities;

(v) that the British Government would do their best to persuade the American Government to use labour and materials from Mauritius for construction work in the islands;

. . . .

(vii) that if the need for the facilities on the islands disappeared the islands should be returned to Mauritius".

The Premier of Mauritius informed the Secretary of State for the Colonies that the proposals put forward by the United Kingdom were acceptable in principle, but that he would discuss the matter with his other ministerial colleagues.

109. On 24 September 1965, the Government of the United Kingdom announced that it was in favour of granting independence to Mauritius.

110. On 6 October 1965, the Secretary of State for the Colonies communicated to the Governor of Mauritius the United Kingdom's acceptance of the following additional understanding that had been sought by the Premier of Mauritius:

(i) The British Government would use their good offices with the United States Government to ensure that the following facilities in the Chagos Archipelago would remain available to the Mauritius Government as far as practicable:

(a) navigational and meteorological facilities;
(b) fishing rights;
(c) use of air strip for emergency landing and for refuelling civil planes without disembarkation of passengers.

(ii) That the benefit of any minerals or oil discovered in or near the Chagos Archipelago should revert to the Mauritius Government.

This additional understanding was eventually incorporated into the final record of the meeting at Lancaster House and formed part of the Lancaster House agreement.

111. In a Minute sent on 5 November 1965 to the United Kingdom Prime Minister, the Secretary of State for the Colonies expressed concern that the United Kingdom would be accused of "creating a . . . colony in a period of decolonization and of establishing new military bases when we should be getting out of the old ones". The Foreign Office

also advised that "the islands chosen have virtually no permanent inhabitants".

112. On 5 November 1965, the Governor of Mauritius informed the United Kingdom Secretary of State that the Mauritius Council of Ministers "confirmed agreement to the detachment of the Chagos Archipelago". The Governor noted that agreement had been given on the conditions set out in paragraph 22 of the Record of the Meeting of 23 September 1965 (which contained the Lancaster House agreement) and that the Council of Ministers had formulated an additional understanding.

C. The Situation of the Chagossians

113. In the early nineteenth century, several hundred persons were brought to the Chagos Archipelago from Mozambique and Madagascar and enslaved to work on coconut plantations owned by British nationals who lived on the island of Mauritius. In the 1830s, 60,000 enslaved persons in Mauritius, including those in the Chagos Archipelago, were set free.

114. Following the 1966 Agreement (see paragraph 36 above), between 1967 and 1973, the inhabitants of the Chagos Archipelago who had left the islands were prevented from returning. The other inhabitants were forcibly removed and prevented from returning to the islands (see paragraph 43 above).

115. On 16 April 1971, the BIOT Commissioner enacted the Immigration Ordinance 1971, which made it unlawful for any person to enter or remain in the Chagos Archipelago without a permit. It also provided for the Commissioner to make an order directing the removal of such a person from the Chagos Archipelago (*Chagos Islanders* v. *Attorney General and BIOT Commissioner* (2003), EWHC 2222, para. 34).

116. In the oral proceedings, the United Kingdom reiterated that it "fully accepts that the manner in which the Chagossians were removed from the Chagos Archipelago, and the way they were treated thereafter, was shameful and wrong, and it deeply regrets that fact".

117. On 4 September 1972, by virtue of an agreement concluded between Mauritius and the United Kingdom, Mauritius accepted payment of the sum of £650,000 in full and final discharge of the United Kingdom's undertaking given in 1965 to meet the cost of resettlement of persons displaced from the Chagos Archipelago. On 24 March 1973, Prime Minister Ramgoolam wrote to the British High Commissioner in Port Louis, acknowledging receipt of the sum of £650,000, but emphasizing that the payment did not affect the verbal agreement on minerals, fishing and prospecting rights reached at Lancaster House on 23 September 1965 and was subject to the remaining Lancaster House undertakings, including the return of the islands to Mauritius without compensation if the need for use by the United Kingdom of the islands no longer existed.

118. In February 1975, Mr. Michel Vencatessen, a former resident of the Chagos Archipelago, brought an action against the United Kingdom Government claiming damages for intimidation, deprivation of liberty and assault in relation to his removal from the Chagos Archipelago in 1971. In 1982, the claim was stayed by agreement of the parties.

119. On 7 July 1982, an agreement was concluded between the Governments of Mauritius and the United Kingdom, for the payment by the United Kingdom of the sum of £4 million on an *ex gratia* basis, with no admission of liability on the part of the United Kingdom, "in full and final settlement of all claims whatsoever of the kind referred to in Article 2 of this Agreement against . . . the United Kingdom by or on behalf of the Ilois". According to Recital 2 of the preamble to the Agreement, the term "Ilois" has to be understood as those who went to Mauritius on their departure or removal from the Chagos Archipelago after November 1965. Article 2 provides:

> "The claims referred to in Article 1 of this Agreement are solely claims by or on behalf of the Ilois arising out of:
>
> *(a)* All acts, matters and things done by or pursuant to the British Indian Ocean Territory Order 1965, including the closure of the plantations in the Chagos Archipelago, the departure or removal of those living or working there, the termination of their contracts, their transfer to and resettlement in Mauritius and their preclusion from returning to the Chagos Archipelago (hereinafter referred to as 'the events'); and
>
> *(b)* Any incidents, facts or situations, whether past, present or future, occurring in the course of the events or arising out of the consequences of the events."

Article 4 requires Mauritius "to procure from each member of the Ilois community in Mauritius a signed renunciation of the claims".

120. The sum of approximately £4 million paid by the United Kingdom was disbursed to 1,344 islanders between 1983 and 1984. As a condition for collecting the funds, the islanders were required to sign or to place a thumbprint on a form renouncing the right to return to the Chagos Archipelago. The form was a one-page legal document, written in English, without a Creole translation. Only 12 persons refused to sign (*Chagos Islanders* v. *Attorney General and BIOT Commissioner* (2003), EWHC 2222, para. 80).

121. In 1998, Mr. Louis Olivier Bancoult, a Chagossian, instituted proceedings in the United Kingdom courts challenging the validity of legislation denying him the right to reside in the Chagos Archipelago. On

3 November 2000, judgment was given in his favour by the Divisional Court which ruled that the relevant provisions of the 1971 Ordinance be quashed (*Regina (Bancoult)* v. *Secretary of State for Foreign and Commonwealth Affairs and Another (No. 1)* (2000)). The United Kingdom Government did not appeal the ruling and it repealed the 1971 Ordinance that had prohibited Chagossians from returning to the Chagos Archipelago. The United Kingdom's Foreign Secretary announced that the United Kingdom Government was examining the feasibility of resettling the Ilois.

122. On the same day that the Divisional Court rendered the judgment in Mr. Bancoult's favour, the United Kingdom made another immigration ordinance applicable to the Chagos Archipelago, with the exception of Diego Garcia (Ordinance No. 4 of 2000). The ordinance provided that restrictions on entry into and residence in the archipelago would not apply to the Chagossians, given their connection to the Chagos Islands. In its written statement, the United Kingdom has submitted that, following the adoption of that ordinance, none of the Chagossians returned to live there although there was no legal bar to them doing so. Chagossians were however not permitted to enter or reside in Diego Garcia.

123. On 6 December 2001, the Human Rights Committee, constituted under the International Covenant on Civil and Political Rights, in considering the periodic reports submitted by the United Kingdom under Article 40 of the said Covenant, noted "the State party's acceptance that its prohibition of the return of Ilois who had left or been removed from the territory was unlawful". It recommended that "the State party should, to the extent still possible, seek to make exercise of the Ilois' right to return to their territory practicable".

124. In June 2002, a feasibility study commissioned by the BIOT Administration concerning the Chagos Archipelago was completed. It was carried out in response to a request made by former inhabitants of the Chagos Archipelago to be permitted to return and live in the archipelago. The study indicated that, while it may be feasible to resettle the islanders in the short term, the costs of maintaining a long-term inhabitation were likely to be prohibitive. Even in the short term, natural events such as periodic flooding from storms and seismic activity, were likely to make life difficult for a resettled population. In 2004, the United Kingdom issued two orders in Council: the British Indian Ocean Territory (Constitution) Order 2004 and the British Indian Ocean Territory (Immigration) Order 2004. These orders declared that no person had the right of abode in the BIOT nor the right without authorization to enter and remain there.

125. In 2004, Mr. Bancoult challenged the validity of the British Indian Ocean Territory (Constitution) Order 2004 and the British Indian Ocean Territory (Immigration) Order 2004 in the courts of the United Kingdom. He succeeded in the High Court. An appeal was brought by the Secretary of State for Foreign and Commonwealth Affairs against the decision of the High Court. The Court of Appeal upheld the decision of the High Court that the orders were invalid on the basis that their content

and the circumstances of their adoption constituted an abuse of power by the United Kingdom Government (*Regina (Bancoult)* v. *Secretary of State for Foreign and Commonwealth Affairs (No. 2)* (2007)).

126. On 30 July 2008, the Human Rights Committee, in considering another periodic report submitted by the United Kingdom, took note of the aforementioned decision of the Court of Appeal. On the basis of Article 12 of the International Covenant on Civil and Political Rights, the Committee recommended that:

> "The State party should ensure that the Chagos islanders can exercise their right to return to their territory and should indicate what measures have been taken in this regard. It should consider compensation for the denial of this right over an extended period."

127. The Secretary of State for Foreign and Commonwealth Affairs appealed the decision of the Court of Appeal (see paragraph 125) upholding Mr. Bancoult's challenge of the validity of the British Indian Ocean Territory (Constitution) Order 2004. On 22 October 2008, the House of Lords upheld the appeal by the Secretary of State for Foreign and Commonwealth Affairs.

128. On 11 December 2012, the European Court of Human Rights, in the *Chagos Islanders* v. *United Kingdom* case, declared inadmissible an application made by a group of 1,786 Chagossians against the United Kingdom for breach of their rights under the European Convention on Human Rights. One of the grounds for the decision was that the claims of the applicants had been settled through implementation of the 1982 Agreement between Mauritius and the United Kingdom.

129. On 20 December 2012, the United Kingdom announced a review of its policy on resettlement of the Chagossians who were forcibly removed from, or prevented from returning to, the Chagos Archipelago. A second feasibility study, carried out between 2014 and 2015, was commissioned by the BIOT Administration to analyse the different options for resettlement in the Chagos Archipelago. The feasibility study concluded that resettlement was possible although there would be significant challenges including high and very uncertain costs, and long-term liabilities for the United Kingdom taxpayer. Thereafter, on 16 November 2016, the United Kingdom decided against resettlement on the "grounds of feasibility, defence and security interests and cost to the British taxpayer".

130. On 8 February 2018, the Supreme Court of the United Kingdom rendered its judgment in the case of *Regina (on the application of Bancoult No. 3)* v. *Secretary of State for Foreign and Commonwealth Affairs* (2018). The case was brought by Mr. Bancoult on behalf of a group of Chagossians who were forcibly removed from the archipelago. In the proceedings, Mr. Bancoult challenged the declaration of a marine protected area by the United Kingdom around the Chagos Archipelago. Mr. Ban-

coult, the appellant, contended that the marine protected area had been established for the improper purpose of rendering impracticable the resettlement of the Chagos islanders on the archipelago. He claimed that this was evidenced by a diplomatic cable sent by the United States Embassy in London to departments of the United States Government in Washington, to elements in its military command structure and to its Embassy in Port Louis, Mauritius. The cable recorded a 2009 meeting in which United States and United Kingdom officials discussed the reasons for the establishment of the marine protected area. The cable was subsequently leaked and published in two national newspapers. Called upon in the appeal to rule on the admissibility of that cable, the Supreme Court held that the cable in question was admissible. However, it dismissed the appeal on other grounds.

131. To date, the Chagossians remain dispersed in several countries, including the United Kingdom, Mauritius and Seychelles. By virtue of United Kingdom law and judicial decisions of that country, they are not allowed to return to the Chagos Archipelago.

IV. The Questions Put to the Court by the General Assembly

132. Having reviewed the factual background of the present request for an advisory opinion, the Court will now examine the two questions put by the General Assembly:

> Question *(a)*: "Was the process of decolonization of Mauritius lawfully completed when Mauritius was granted independence in 1968, following the separation of the Chagos Archipelago from Mauritius and having regard to international law, including obligations reflected in General Assembly resolutions 1514 (XV) of 14 December 1960, 2066 (XX) of 16 December 1965, 2232 (XXI) of 20 December 1966 and 2357 (XXII) of 19 December 1967?"
>
> Question *(b)*: "What are the consequences under international law, including obligations reflected in the above-mentioned resolutions, arising from the continued administration by the United Kingdom of Great Britain and Northern Ireland of the Chagos Archipelago, including with respect to the inability of Mauritius to implement a programme for the resettlement on the Chagos Archipelago of its nationals, in particular those of Chagossian origin?"

133. Some participants have asked the Court to reformulate both questions or to interpret them restrictively. In particular, they have contested the assumption that the resolutions referred to in Question *(a)* would create international obligations for the United Kingdom, thereby prejudging the answer the Court is requested to give. They have also contended that the legal questions really at issue concern the matter of sovereignty over the Chagos Archipelago, which is the subject of a bilateral dispute between Mauritius and the United Kingdom.

134. One participant has asserted that the General Assembly's request, which does not expressly refer to the legal consequences for States of the continued administration by the United Kingdom of the Chagos Archipelago, should be interpreted in such a way as to limit the advisory opinion to the functions of the United Nations, excluding all issues that concern States, in particular, Mauritius and the United Kingdom.

135. The Court recalls that it may depart from the language of the question put to it where the question is not adequately formulated (*Interpretation of the Greco-Turkish Agreement of 1 December 1926 (Final Protocol, Article IV), Advisory Opinion, 1928, P.C.I.J., Series B, No. 16*) or does not reflect the "legal questions really in issue" (*Interpretation of the Agreement of 25 March 1951 between the WHO and Egypt, Advisory Opinion, I.C.J. Reports 1980*, p. 89, para. 35). Similarly, where the question asked is ambiguous or vague, the Court may clarify it before giving its opinion (*Application for Review of Judgement No. 273 of the United Nations Administrative Tribunal, Advisory Opinion, I.C.J. Reports 1982*, p. 348, para. 46). Although, in exceptional circumstances, the Court may reformulate the questions referred to it for an advisory opinion, it only does so to ensure that it gives a reply "based on law" (*Western Sahara, Advisory Opinion, I.C.J. Reports 1975*, p. 18, para. 15).

136. The Court considers that there is no need for it to reformulate the questions submitted to it for an advisory opinion in these proceedings. Indeed, the first question is whether the process of decolonization of Mauritius was lawfully completed in 1968, having regard to international law, following the separation of the Chagos Archipelago from its territory in 1965. The General Assembly's reference to certain resolutions which it adopted during this period does not, in the Court's view, prejudge either their legal content or scope. In Question *(a)*, the General Assembly asks the Court to examine certain events which occurred between 1965 and 1968, and which fall within the framework of the process of decolonization of Mauritius as a non-self-governing territory. It did not submit to the Court a bilateral dispute over sovereignty which might exist between the United Kingdom and Mauritius. In Question *(b)*, which is clearly linked to Question *(a)*, the Court is asked to state the consequences, under international law, of the continued administration by the United Kingdom of the Chagos Archipelago. By referring in this way to international law, the General Assembly necessarily had in mind the consequences for the subjects of that law, including States.

137. It is for the Court to state the law applicable to the factual situation referred to it by the General Assembly in its request for an advisory opinion. There is thus no need for it to interpret restrictively the questions put to it by the General Assembly. When the Court states the law in the exercise of its advisory function, it lends its assistance to the General Assembly in the solution of a problem confronting it (*Western Sahara,*

Advisory Opinion, I.C.J. Reports 1975, p. 21, para. 23). In giving its advisory opinion, the Court is not interfering with the exercise of the General Assembly's own functions.

138. The Court will now consider the first question put to it by the General Assembly, namely whether the process of decolonization of Mauritius was lawfully completed having regard to international law.

A. Whether the Process of Decolonization of Mauritius Was Lawfully Completed Having Regard to International Law (Question (a)*)*

139. In order to pronounce on whether the process of decolonization of Mauritius was lawfully completed having regard to international law, the Court will determine, first, the relevant period of time for the purpose of identifying the applicable rules of international law and, secondly, the content of that law. In addition, since the General Assembly has referred to some of the resolutions it adopted, the Court, in determining the obligations reflected in these resolutions, will have to examine the functions of the General Assembly in conducting the process of decolonization.

1. The relevant period of time for the purpose of identifying the applicable rules of international law

140. In Question *(a)*, the General Assembly situates the process of decolonization of Mauritius in the period between the separation of the Chagos Archipelago from its territory in 1965 and its independence in 1968. It is therefore by reference to this period that the Court is required to identify the rules of international law that are applicable to that process.

141. Various participants have stated that international law is not frozen at the date when the first steps were taken towards the realization of the right to self-determination in respect of a territory.

142. The Court is of the view that, while its determination of the applicable law must focus on the period from 1965 to 1968, this will not prevent it, particularly when customary rules are at issue, from considering the evolution of the law on self-determination since the adoption of the Charter of the United Nations and of resolution 1514 (XV) of 14 December 1960 entitled "Declaration on the Granting of Independence to Colonial Countries and Peoples". Indeed, State practice and *opinio juris*, i.e. the acceptance of that practice as law (Article 38 of the Statute of the Court), are consolidated and confirmed gradually over time.

143. The Court may also rely on legal instruments which postdate the period in question, when those instruments confirm or interpret preexisting rules or principles.

2. Applicable international law

144. The Court will have to determine the nature, content and scope of the right to self-determination applicable to the process of decolonization of Mauritius, a non-self-governing territory recognized as such, from 1946 onwards, both in United Nations practice and by the administering Power itself. The Court is conscious that the right to self-determination, as a fundamental human right, has a broad scope of application. However, to answer the question put to it by the General Assembly, the Court will confine itself, in this Advisory Opinion, to analysing the right to self-determination in the context of decolonization.

145. The participants in the advisory proceedings have adopted opposing positions on the customary status of the right to self-determination, its content and how it was exercised in the period between 1965 and 1968. Some participants have asserted that the right to self-determination was firmly established in customary international law at the time in question. Others have maintained that the right to self-determination was not an integral part of customary international law in the period under consideration.

146. The Court will begin by recalling that "respect for the principle of equal rights and self-determination of peoples" is one of the purposes of the United Nations (Article 1, paragraph 2, of the Charter). Such a purpose concerns, in particular, the "Declaration regarding non-self-governing territories" (Chapter XI of the Charter), since the "Members of the United Nations which have or assume responsibilities for the administration of territories whose peoples have not yet attained a full measure of self-government" are obliged to "develop [the] self-government" of those peoples (Article 73 of the Charter).

147. In the Court's view, it follows that the legal régime of non-self-governing territories, as set out in Chapter XI of the Charter, was based on the progressive development of their institutions so as to lead the populations concerned to exercise their right to self-determination.

148. Having made respect for the principle of equal rights and self-determination of peoples one of the purposes of the United Nations, the Charter included provisions that would enable non-self-governing territories ultimately to govern themselves. It is in this context that the Court must ascertain when the right to self-determination crystallized as a customary rule binding on all States.

149. Custom is constituted through "general practice accepted as law" (Article 38 of the Statute of the Court). The Court has emphasized that both elements, namely general practice and *opinio juris*, which are constitutive of international custom, are closely linked:

> "Not only must the acts concerned amount to a settled practice, but they must also be such, or be carried out in such a way, as to be

> evidence of a belief that this practice is rendered obligatory by the existence of a rule of law requiring it. The need for such a belief, i.e., the existence of a subjective element, is implicit in the very notion of the *opinio juris sive necessitatis*. The States concerned must therefore feel that they are conforming to what amounts to a legal obligation. The frequency, or even habitual character of the acts is not in itself enough." (*North Sea Continental Shelf, Judgment, I.C.J. Reports 1969*, p. 44, para. 77.)

150. The adoption of resolution 1514 (XV) of 14 December 1960 represents a defining moment in the consolidation of State practice on decolonization. Prior to that resolution, the General Assembly had affirmed on several occasions the right to self-determination (resolutions 637 (VII) of 16 December 1952, 738 (VIII) of 28 November 1953 and 1188 (XII) of 11 December 1957) and a number of non-self-governing territories had acceded to independence. General Assembly resolution 1514 (XV) clarifies the content and scope of the right to self-determination. The Court notes that the decolonization process accelerated in 1960, with 18 countries, including 17 in Africa, gaining independence. During the 1960s, the peoples of an additional 28 non-self-governing-territories exercised their right to self-determination and achieved independence. In the Court's view, there is a clear relationship between resolution 1514 (XV) and the process of decolonization following its adoption.

151. As the Court has noted:

> "General Assembly resolutions, even if they are not binding, may sometimes have normative value. They can, in certain circumstances, provide evidence important for establishing the existence of a rule or the emergence of an *opinio juris*. To establish whether this is true of a given General Assembly resolution, it is necessary to look at its content and the conditions of its adoption; it is also necessary to see whether an *opinio juris* exists as to its normative character." (*Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996 (I)*, pp. 254-255, para. 70.)

152. The Court considers that, although resolution 1514 (XV) is formally a recommendation, it has a declaratory character with regard to the right to self-determination as a customary norm, in view of its content and the conditions of its adoption. The resolution was adopted by 89 votes with 9 abstentions. None of the States participating in the vote contested the existence of the right of peoples to self-determination. Certain States justified their abstention on the basis of the time required for the implementation of such a right.

153. The wording used in resolution 1514 (XV) has a normative character, in so far as it affirms that "[a]ll peoples have the right to self-determination". Its preamble proclaims "the necessity of bringing to a speedy and unconditional end colonialism in all its forms and manifesta-

tions" and its first paragraph states that "[t]he subjection of peoples to alien subjugation, domination and exploitation constitutes a denial of fundamental human rights [and] is contrary to the Charter of the United Nations".

This resolution further provides that "[i]mmediate steps shall be taken, in Trust and Non-Self-Governing Territories or all other territories which have not yet attained independence, to transfer all powers to the peoples of those territories, without any conditions or reservations, in accordance with their freely expressed will and desire". In order to prevent any dismemberment of non-self-governing territories, paragraph 6 of resolution 1514 (XV) provides that:

> "Any attempt aimed at the partial or total disruption of the national unity and the territorial integrity of a country is incompatible with the purposes and principles of the Charter of the United Nations."

154. Article 1, common to the International Covenant on Civil and Political Rights and to the International Covenant on Economic, Social and Cultural Rights, adopted on 16 December 1966, by General Assembly resolution 2200 A (XXI), reaffirms the right of all peoples to self-determination, and provides, *inter alia*, that:

> "The States Parties to the present Covenant, including those having responsibility for the administration of Non-Self-Governing and Trust Territories, shall promote the realization of the right of self-determination, and shall respect that right, in conformity with the provisions of the Charter of the United Nations."

155. The nature and scope of the right to self-determination of peoples, including respect for "the national unity and territorial integrity of a State or country", were reiterated in the Declaration on Principles of International Law concerning Friendly Relations and Co-operation among States in accordance with the Charter of the United Nations. This Declaration was annexed to General Assembly resolution 2625 (XXV) which was adopted by consensus in 1970. By recognizing the right to self-determination as one of the "basic principles of international law", the Declaration confirmed its normative character under customary international law.

156. The means of implementing the right to self-determination in a non-self-governing territory, described as "geographically separate and . . . distinct ethnically and/or culturally from the country administering it", were set out in Principle VI of General Assembly resolution 1541 (XV), adopted on 15 December 1960:

> "A Non-Self-Governing Territory can be said to have reached a full measure of self-government by:
>
> *(a)* Emergence as a sovereign independent State;
> *(b)* Free association with an independent State; or
> *(c)* Integration with an independent State."

157. The Court recalls that, while the exercise of self-determination may be achieved through one of the options laid down by resolution 1541 (XV), it must be the expression of the free and genuine will of the people concerned. However, "[t]he right of self-determination leaves the General Assembly a measure of discretion with respect to the forms and procedures by which that right is to be realized" (*Western Sahara, Advisory Opinion, I.C.J. Reports 1975*, p. 36, para. 71).

158. The right to self-determination under customary international law does not impose a specific mechanism for its implementation in all instances, as the Court has observed:

> "The validity of the principle of self-determination, defined as the need to pay regard to the freely expressed will of peoples, is not affected by the fact that in certain cases the General Assembly has dispensed with the requirement of consulting the inhabitants of a given territory. Those instances were based either on the consideration that a certain population did not constitute a 'people' entitled to self-determination or on the conviction that a consultation was totally unnecessary, in view of special circumstances." (*Ibid.*, p. 33, para. 59.)

159. Some participants have argued that the customary status of the right to self-determination did not entail an obligation to implement that right within the boundaries of the non-self-governing territory.

160. The Court recalls that the right to self-determination of the people concerned is defined by reference to the entirety of a non-self-governing territory, as stated in the aforementioned paragraph 6 of resolution 1514 (XV) (see paragraph 153 above). Both State practice and *opinio juris* at the relevant time confirm the customary law character of the right to territorial integrity of a non-self-governing territory as a corollary of the right to self-determination. No example has been brought to the attention of the Court in which, following the adoption of resolution 1514 (XV), the General Assembly or any other organ of the United Nations has considered as lawful the detachment by the administering Power of part of a non-self-governing territory, for the purpose of maintaining it under its colonial rule. States have consistently emphasized that respect for the territorial integrity of a non-self-governing territory is a key element of the exercise of the right to self-determination under international law. The Court considers that the peoples of non-self-governing territories are entitled to exercise their right to self-determination in relation to their territory as a whole, the integrity of which must be respected by the administering Power. It follows that any detachment by the administering Power of part of a non-self-governing territory, unless based on the freely expressed and genuine will of the people of the territory concerned, is contrary to the right to self-determination.

161. In the Court's view, the law on self-determination constitutes the applicable international law during the period under consideration,

namely between 1965 and 1968. The Court noted in its Advisory Opinion on *Namibia* the consolidation of that law:

> "the subsequent development of international law in regard to non-self-governing territories, as enshrined in the Charter of the United Nations, made the principle of self-determination applicable to all of them" (*Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971*, p. 31, para. 52).

162. The Court will now examine the functions of the General Assembly during the process of decolonization.

3. The functions of the General Assembly with regard to decolonization

163. The General Assembly has played a crucial role in the work of the United Nations on decolonization, in particular, since the adoption of resolution 1514 (XV). It has overseen the implementation of the obligations of Member States in this regard, such as they are laid down in Chapter XI of the Charter and as they arise from the practice which has developed within the Organization.

164. It is in this context that the Court is asked in Question *(a)* to consider, in its analysis of the international law applicable to the process of decolonization of Mauritius, the obligations reflected in General Assembly resolutions 2066 (XX) of 16 December 1965, 2232 (XXI) of 20 December 1966 and 2357 (XXII) of 19 December 1967.

165. In resolution 2066 (XX) of 16 December 1965, entitled "Question of Mauritius", having noted "with deep concern that any step taken by the administering Power to detach certain islands from the Territory of Mauritius for the purpose of establishing a military base would be in contravention of the Declaration, and in particular of paragraph 6 thereof", the General Assembly, in the operative part of the text, invites "the administering Power to take no action which would dismember the Territory of Mauritius and violate its territorial integrity".

166. In resolutions 2232 (XXI) and 2357 (XXII), which are more general in nature and relate to the monitoring of the situation in a number of non-self-governing territories, the General Assembly

> "[r]eiterates its declaration that any attempt aimed at the partial or total disruption of the national unity and the territorial integrity of colonial Territories and the establishment of military bases and installations in these Territories is incompatible with the purposes and principles of the Charter of the United Nations and of General Assembly resolution 1514 (XV)".

167. In the Court's view, by inviting the United Kingdom to comply with its international obligations in conducting the process of decolonization of Mauritius, the General Assembly acted within the framework of the Charter and within the scope of the functions assigned to it to oversee the application of the right to self-determination. The General Assembly assumed those functions in order to supervise the implementation of obligations incumbent upon administering Powers under the Charter. It thus established a special committee tasked with examining the factors that would enable it to decide "whether any territory is or is not a territory whose people have not yet attained a full measure of self-government" (resolution 334 (IV) of 2 December 1949). It has been the Assembly's consistent practice to adopt resolutions to pronounce on the specific situation of any non-self-governing territory. Thus, immediately after the adoption of resolution 1514 (XV), it established the Committee of Twenty-Four tasked with monitoring the implementation of that resolution and making suggestions and recommendations thereon (resolution 1654 (XVI) of 27 November 1961). The General Assembly also monitors the means by which the free and genuine will of the people of a non-self-governing territory is expressed, including the formulation of questions submitted for popular consultation.

168. The General Assembly has consistently called upon administering Powers to respect the territorial integrity of non-self-governing territories, especially after the adoption of resolution 1514 (XV) of 14 December 1960 (see, for example, General Assembly resolutions 2023 (XX) of 5 November 1965 and 2183 (XXI) of 12 December 1966 (Question of Aden); 3161 (XXVIII) of 14 December 1973 and 3291 (XXIX) of 13 December 1974 (Question of the Comoro Archipelago); 34/91 of 12 December 1979 (Question of the islands of Glorieuses, Juan de Nova, Europa and Bassas da India)).

169. The Court will now examine the circumstances relating to the detachment of the Chagos Archipelago from Mauritius and determine whether it was carried out in accordance with international law.

4. Application in the present proceedings

170. It is necessary to begin by recalling the legal status of Mauritius before its independence. Following the conclusion of the 1814 Treaty of Paris, the "island of Mauritius and the Dependencies of Mauritius" [*"l'île Maurice et les dépendances de Maurice"*], including the Chagos Archipelago, were administered without interruption by the United Kingdom. This is how the whole of Mauritius, including its dependencies, came to appear on the list of non-self-governing territories drawn up by the General Assembly (resolution 66 (I) of 14 December 1946). It was on this basis that the United Kingdom regularly provided the General Assembly with information relating to the

existing conditions in that territory, in accordance with Article 73 of the Charter. Therefore, at the time of its detachment from Mauritius in 1965, the Chagos Archipelago was clearly an integral part of that non-self-governing territory.

171. In the Lancaster House agreement of 23 September 1965, the Premier and other representatives of Mauritius, which was still under the authority of the United Kingdom as administering Power, agreed in principle to the detachment of the Chagos Archipelago from the territory of Mauritius. This agreement in principle was given on condition that the archipelago could not be ceded to any third party and would be returned to Mauritius at a later date, a condition which was accepted at the time by the United Kingdom.

172. The Court observes that when the Council of Ministers agreed in principle to the detachment from Mauritius of the Chagos Archipelago, Mauritius was, as a colony, under the authority of the United Kingdom. As noted at the time by the Committee of Twenty-Four: "the present Constitution of Mauritius . . . do[es] not allow the representatives of the people to exercise real legislative or executive powers, and that authority is nearly all concentrated in the hands of the United Kingdom Government and its representatives" (UN doc. A/5800/Rev.1 (1964-1965), p. 352, para. 154). In the Court's view, it is not possible to talk of an international agreement, when one of the parties to it, Mauritius, which is said to have ceded the territory to the United Kingdom, was under the authority of the latter. The Court is of the view that heightened scrutiny should be given to the issue of consent in a situation where a part of a non-self-governing territory is separated to create a new colony. Having reviewed the circumstances in which the Council of Ministers of the colony of Mauritius agreed in principle to the detachment of the Chagos Archipelago on the basis of the Lancaster House agreement, the Court considers that this detachment was not based on the free and genuine expression of the will of the people concerned.

173. In its resolution 2066 (XX) of 16 December 1965, adopted a few weeks after the detachment of the Chagos Archipelago, the General Assembly deemed it appropriate to recall the obligation of the United Kingdom, as the administering Power, to respect the territorial integrity of Mauritius. The Court considers that the obligations arising under international law and reflected in the resolutions adopted by the General Assembly during the process of decolonization of Mauritius require the United Kingdom, as the administering Power, to respect the territorial integrity of that country, including the Chagos Archipelago.

174. The Court concludes that, as a result of the Chagos Archipelago's unlawful detachment and its incorporation into a new colony, known as the BIOT, the process of decolonization of Mauritius was not lawfully completed when Mauritius acceded to independence in 1968.

B. The Consequences under International Law arising from the Continued Administration by the United Kingdom of the Chagos Archipelago (Question (b)*)*

175. Having established that the process of decolonization of Mauritius was not lawfully completed in 1968, the Court must now examine the consequences, under international law, arising from the United Kingdom's continued administration of the Chagos Archipelago (Question *(b)*). The Court will answer this question, drafted in the present tense, on the basis of the international law applicable at the time its opinion is given.

176. Several participants in the proceedings before the Court have argued that the United Kingdom's continued administration of the Chagos Archipelago has consequences under international law not only for the United Kingdom itself, but also for other States and international organizations. The consequences mentioned include the requirement for the United Kingdom to put an immediate end to its administration of the Chagos Archipelago and return it to Mauritius. Some participants have gone further, advocating that the United Kingdom must make good the injury suffered by Mauritius. Others have considered that the former administering Power must co-operate with Mauritius regarding the resettlement on the Chagos Archipelago of the nationals of the latter, in particular those of Chagossian origin.

In contrast, one participant has contended that the only consequence for the United Kingdom under international law concerns the retrocession of the Chagos Archipelago when it is no longer needed for the defence purposes of that State. Finally, a few participants have taken the view that the time frame for completing the decolonization of Mauritius is a matter for bilateral negotiations to be conducted between Mauritius and the United Kingdom.

As regards the consequences for third States, some participants have maintained that those States have an obligation not to recognize the unlawful situation resulting from the United Kingdom's continued administration of the Chagos Archipelago and not to render assistance in maintaining it.

* *

177. The Court having found that the decolonization of Mauritius was not conducted in a manner consistent with the right of peoples to self-determination, it follows that the United Kingdom's continued administration of the Chagos Archipelago constitutes a wrongful act entailing the international responsibility of that State (see *Corfu Channel (United Kingdom* v. *Albania), Merits, Judgment, I.C.J. Reports 1949*, p. 23; *Gabčíkovo-Nagymaros Project (Hungary/Slovakia), Judgment, I.C.J. Reports 1997*, p. 38, para. 47; see also Article 1 of the Articles on Responsibility of States for Internationally Wrongful Acts). It is an

unlawful act of a continuing character which arose as a result of the separation of the Chagos Archipelago from Mauritius.

178. Accordingly, the United Kingdom is under an obligation to bring an end to its administration of the Chagos Archipelago as rapidly as possible, thereby enabling Mauritius to complete the decolonization of its territory in a manner consistent with the right of peoples to self-determination.

179. The modalities necessary for ensuring the completion of the decolonization of Mauritius fall within the remit of the United Nations General Assembly, in the exercise of its functions relating to decolonization. As the Court has stated in the past, it is not for it to "determine what steps the General Assembly may wish to take after receiving the Court's opinion or what effect that opinion may have in relation to those steps" (*Accordance with International Law of the Unilateral Declaration of Independence in Respect of Kosovo, Advisory Opinion, I.C.J. Reports 2010 (II)*, p. 421, para. 44).

180. Since respect for the right to self-determination is an obligation *erga omnes*, all States have a legal interest in protecting that right (see *East Timor (Portugal* v. *Australia), Judgment, I.C.J. Reports 1995*, p. 102, para. 29; see also *Barcelona Traction, Light and Power Company, Limited (New Application: 1962) (Belgium* v. *Spain), Second Phase, Judgment, I.C.J. Reports 1970*, p. 32, para. 33). The Court considers that, while it is for the General Assembly to pronounce on the modalities required to ensure the completion of the decolonization of Mauritius, all Member States must co-operate with the United Nations to put those modalities into effect. As recalled in the Declaration on the Principles of International Law concerning Friendly Relations and Co-operation among States in accordance with the Charter of the United Nations:

> "Every State has the duty to promote, through joint and separate action, realization of the principle of equal rights and self-determination of peoples, in accordance with the provisions of the Charter, and to render assistance to the United Nations in carrying out the responsibilities entrusted to it by the Charter regarding the implementation of the principle" (General Assembly resolution 2625 (XXV)).

181. As regards the resettlement on the Chagos Archipelago of Mauritian nationals, including those of Chagossian origin, this is an issue relating to the protection of the human rights of those concerned, which should be addressed by the General Assembly during the completion of the decolonization of Mauritius.

182. In response to Question *(b)* of the General Assembly, relating to the consequences under international law that arise from the continued administration by the United Kingdom of the Chagos Archipelago, the Court concludes that the United Kingdom has an obligation to bring to an end its administration of the Chagos Archipelago as rapidly as possi-

ble, and that all Member States must co-operate with the United Nations to complete the decolonization of Mauritius.

* * *

183. For these reasons,

THE COURT,

(1) Unanimously,

Finds that it has jurisdiction to give the advisory opinion requested;

(2) By twelve votes to two,

Decides to comply with the request for an advisory opinion;

IN FAVOUR: *President* Yusuf; *Vice-President* Xue; *Judges* Abraham, Bennouna, Cançado Trindade, Gaja, Sebutinde, Bhandari, Robinson, Gevorgian, Salam, Iwasawa;

AGAINST: *Judges* Tomka, Donoghue;

(3) By thirteen votes to one,

Is of the opinion that, having regard to international law, the process of decolonization of Mauritius was not lawfully completed when that country acceded to independence in 1968, following the separation of the Chagos Archipelago;

IN FAVOUR: *President* Yusuf; *Vice-President* Xue; *Judges* Tomka, Abraham, Bennouna, Cançado Trindade, Gaja, Sebutinde, Bhandari, Robinson, Gevorgian, Salam, Iwasawa;

AGAINST: *Judge* Donoghue;

(4) By thirteen votes to one,

Is of the opinion that the United Kingdom is under an obligation to bring to an end its administration of the Chagos Archipelago as rapidly as possible;

IN FAVOUR: *President* Yusuf; *Vice-President* Xue; *Judges* Tomka, Abraham, Bennouna, Cançado Trindade, Gaja, Sebutinde, Bhandari, Robinson, Gevorgian, Salam, Iwasawa;

AGAINST: *Judge* Donoghue;

(5) By thirteen votes to one,

Is of the opinion that all Member States are under an obligation to co-operate with the United Nations in order to complete the decolonization of Mauritius.

IN FAVOUR: *President* Yusuf; *Vice-President* Xue; *Judges* Tomka, Abraham, Bennouna, Cançado Trindade, Gaja, Sebutinde, Bhandari, Robinson, Gevorgian, Salam, Iwasawa;

AGAINST: *Judge* Donoghue.

Done in French and in English, the French text being authoritative, at the Peace Palace, The Hague, this twenty-fifth day of February, two thousand and nineteen, in two copies, one of which will be placed in the archives of the Court and the other transmitted to the Secretary-General of the United Nations.

(Signed) Abdulqawi Ahmed YUSUF,
President.

(Signed) Philippe COUVREUR,
Registrar.

Vice-President XUE appends a declaration to the Advisory Opinion of the Court; Judges TOMKA and ABRAHAM append declarations to the Advisory Opinion of the Court; Judge CANÇADO TRINDADE appends a separate opinion to the Advisory Opinion of the Court; Judges CANÇADO TRINDADE and ROBINSON append a joint declaration to the Advisory Opinion of the Court; Judge DONOGHUE appends a dissenting opinion to the Advisory Opinion of the Court; Judges GAJA, SEBUTINDE and ROBINSON append separate opinions to the Advisory Opinion of the Court; Judges GEVORGIAN, SALAM and IWASAWA append declarations to the Advisory Opinion of the Court.

(Initialled) A.A.Y.
(Initialled) Ph.C.

Annex 3

INTERNATIONAL COURT OF JUSTICE

REPORTS OF JUDGMENTS,
ADVISORY OPINIONS AND ORDERS

LEGALITY OF THE THREAT OR USE OF NUCLEAR WEAPONS

ADVISORY OPINION OF 8 JULY 1996

1996

COUR INTERNATIONALE DE JUSTICE

RECUEIL DES ARRÊTS,
AVIS CONSULTATIFS ET ORDONNANCES

LICÉITÉ DE LA MENACE OU DE L'EMPLOI D'ARMES NUCLÉAIRES

AVIS CONSULTATIF DU 8 JUILLET 1996

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INTERNATIONAL COURT OF JUSTICE

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8 July 1996

LEGALITY OF THE THREAT OR USE OF NUCLEAR WEAPONS

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Provisions of the Charter relating to the threat or use of force — Article 2, paragraph 4 — The Charter neither expressly prohibits, nor permits, the use of any specific weapon — Article 51 — Conditions of necessity and proportionality — The notions of "threat" and "use" of force stand together — Possession of nuclear weapons, deterrence and threat.

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occasion of the extension of the Non-Proliferation Treaty — Absence of comprehensive and universal conventional prohibition of the use or the threat of use of nuclear weapons as such — Unlawfulness per se: *customary law — Consistent practice of non-utilization of nuclear weapons — Policy of deterrence — General Assembly resolutions affirming the illegality of nuclear weapons — Continuing tensions between the nascent* opinio juris *and the still strong adherence to the practice of deterrence.*

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Right of a State to survival and right to resort to self-defence — Policy of deterrence — Reservations to undertakings given by certain nuclear-weapon States not to resort to such weapons.

Current state of international law and elements of fact available to the Court — Use of nuclear weapons in an extreme circumstance of self-defence in which the very survival of a State is at stake.

Article VI of the Non-Proliferation Treaty — Obligation to negotiate in good faith and to achieve nuclear disarmament in all its aspects.

ADVISORY OPINION

Present: *President* BEDJAOUI; *Vice-President* SCHWEBEL; *Judges* ODA, GUILLAUME, SHAHABUDDEEN, WEERAMANTRY, RANJEVA, HERCZEGH, SHI, FLEISCHHAUER, KOROMA, VERESHCHETIN, FERRARI BRAVO, HIGGINS; *Registrar* VALENCIA-OSPINA.

On the legality of the threat or use of nuclear weapons,

THE COURT,

composed as above,

gives the following Advisory Opinion:

1. The question upon which the advisory opinion of the Court has been requested is set forth in resolution 49/75 K adopted by the General Assembly of the United Nations (hereinafter called the "General Assembly") on 15 December 1994. By a letter dated 19 December 1994, received in the Registry by facsimile on 20 December 1994 and filed in the original on 6 January 1995, the Secretary-General of the United Nations officially communicated to the Registrar the decision taken by the General Assembly to submit the question to the Court for an advisory opinion. Resolution 49/75 K, the English text of which was enclosed with the letter, reads as follows:

> "*The General Assembly,*
>
> *Conscious* that the continuing existence and development of nuclear weapons pose serious risks to humanity,
>
> *Mindful* that States have an obligation under the Charter of the United

Nations to refrain from the threat or use of force against the territorial integrity or political independence of any State,

Recalling its resolutions 1653 (XVI) of 24 November 1961, 33/71 B of 14 December 1978, 34/83 G of 11 December 1979, 35/152 D of 12 December 1980, 36/92 I of 9 December 1981, 45/59 B of 4 December 1990 and 46/37 D of 6 December 1991, in which it declared that the use of nuclear weapons would be a violation of the Charter and a crime against humanity,

Welcoming the progress made on the prohibition and elimination of weapons of mass destruction, including the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction[1] and the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction[2],

Convinced that the complete elimination of nuclear weapons is the only guarantee against the threat of nuclear war,

Noting the concerns expressed in the Fourth Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons that insufficient progress had been made towards the complete elimination of nuclear weapons at the earliest possible time,

Recalling that, convinced of the need to strengthen the rule of law in international relations, it has declared the period 1990-1999 the United Nations Decade of International Law[3],

Noting that Article 96, paragraph 1, of the Charter empowers the General Assembly to request the International Court of Justice to give an advisory opinion on any legal question,

Recalling the recommendation of the Secretary-General, made in his report entitled 'An Agenda for Peace'[4], that United Nations organs that are authorized to take advantage of the advisory competence of the International Court of Justice turn to the Court more frequently for such opinions,

Welcoming resolution 46/40 of 14 May 1993 of the Assembly of the World Health Organization, in which the organization requested the International Court of Justice to give an advisory opinion on whether the use of nuclear weapons by a State in war or other armed conflict would be a breach of its obligations under international law, including the Constitution of the World Health Organization,

Decides, pursuant to Article 96, paragraph 1, of the Charter of the United Nations, to request the International Court of Justice urgently to render its advisory opinion on the following question: 'Is the threat or use of nuclear weapons in any circumstance permitted under international law?'

---

[1] Resolution 2826 (XXVI), annex.

[2] See *Official Records of the General Assembly, Forty-seventh Session, Supplement No. 27* (A/47/27), appendix I.

[3] Resolution 44/23.

[4] A/47/277-S/24111."

2. Pursuant to Article 65, paragraph 2, of the Statute, the Secretary-General of the United Nations communicated to the Court a dossier of documents likely to throw light upon the question.

3. By letters dated 21 December 1994, the Registrar, pursuant to Article 66, paragraph 1, of the Statute, gave notice of the request for an advisory opinion to all States entitled to appear before the Court.

4. By an Order dated 1 February 1995 the Court decided that the States entitled to appear before it and the United Nations were likely to be able to furnish information on the question, in accordance with Article 66, paragraph 2, of the Statute. By the same Order, the Court fixed, respectively, 20 June 1995 as the time-limit within which written statements might be submitted to it on the question, and 20 September 1995 as the time-limit within which States and organizations having presented written statements might submit written comments on the other written statements in accordance with Article 66, paragraph 4, of the Statute. In the aforesaid Order, it was stated in particular that the General Assembly had requested that the advisory opinion of the Court be rendered "urgently"; reference was also made to the procedural time-limits already fixed for the request for an advisory opinion previously submitted to the Court by the World Health Organization on the question of the *Legality of the Use by a State of Nuclear Weapons in Armed Conflict.*

On 8 February 1995, the Registrar addressed to the States entitled to appear before the Court and to the United Nations the special and direct communication provided for in Article 66, paragraph 2, of the Statute.

5. Written statements were filed by the following States: Bosnia and Herzegovina, Burundi, Democratic People's Republic of Korea, Ecuador, Egypt, Finland, France, Germany, India, Ireland, Islamic Republic of Iran, Italy, Japan, Lesotho, Malaysia, Marshall Islands, Mexico, Nauru, Netherlands, New Zealand, Qatar, Russian Federation, Samoa, San Marino, Solomon Islands, Sweden, United Kingdom of Great Britain and Northern Ireland, and United States of America. In addition, written comments on those written statements were submitted by the following States: Egypt, Nauru and Solomon Islands. Upon receipt of those statements and comments, the Registrar communicated the text to all States having taken part in the written proceedings.

6. The Court decided to hold public sittings, opening on 30 October 1995, at which oral statements might be submitted to the Court by any State or organization which had been considered likely to be able to furnish information on the question before the Court. By letters dated 23 June 1995, the Registrar requested the States entitled to appear before the Court and the United Nations to inform him whether they intended to take part in the oral proceedings; it was indicated, in those letters, that the Court had decided to hear, during the same public sittings, oral statements relating to the request for an advisory opinion from the General Assembly as well as oral statements concerning the above-mentioned request for an advisory opinion laid before the Court by the World Health Organization, on the understanding that the United Nations would be entitled to speak only in regard to the request submitted by the General Assembly, and it was further specified therein that the participants in the oral proceedings which had not taken part in the written proceedings would receive the text of the statements and comments produced in the course of the latter.

7. By a letter dated 20 October 1995, the Republic of Nauru requested the Court's permission to withdraw the written comments submitted on its behalf

in a document entitled "Response to submissions of other States". The Court granted the request and, by letters dated 30 October 1995, the Deputy-Registrar notified the States to which the document had been communicated, specifying that the document consequently did not form part of the record before the Court.

8. Pursuant to Article 106 of the Rules of Court, the Court decided to make the written statements and comments submitted to the Court accessible to the public, with effect from the opening of the oral proceedings.

9. In the course of public sittings held from 30 October 1995 to 15 November 1995, the Court heard oral statements in the following order by:

for the Commonwealth of Australia: Mr. Gavan Griffith, Q.C., Solicitor-General of Australia, Counsel,
The Honourable Gareth Evans, Q.C., Senator, Minister for Foreign Affairs, Counsel;

for the Arab Republic of Egypt: Mr. George Abi-Saab, Professor of International Law, Graduate Institute of International Studies, Geneva, Member of the Institute of International Law;

for the French Republic: Mr. Marc Perrin de Brichambaut, Director of Legal Affairs, Ministry of Foreign Affairs,
Mr. Alain Pellet, Professor of International Law, University of Paris X and Institute of Political Studies, Paris;

for the Federal Republic of Germany: Mr. Hartmut Hillgenberg, Director-General of Legal Affairs, Ministry of Foreign Affairs;

for Indonesia: H.E. Mr. Johannes Berchmans Soedarmanto Kadarisman, Ambassador of Indonesia to the Netherlands;

for Mexico: H.E. Mr. Sergio González Gálvez, Ambassador, Under-Secretary of Foreign Relations;

for the Islamic Republic of Iran: H.E. Mr. Mohammad J. Zarif, Deputy Minister, Legal and International Affairs, Ministry of Foreign Affairs;

for Italy: Mr. Umberto Leanza, Professor of International Law at the Faculty of Law at the University of Rome "Tor Vergata", Head of the Diplomatic Legal Service at the Ministry of Foreign Affairs;

for Japan: H.E. Mr. Takekazu Kawamura, Ambassador, Director General for Arms Control and Scientific Affairs, Ministry of Foreign Affairs,
Mr. Takashi Hiraoka, Mayor of Hiroshima,
Mr. Iccho Itoh, Mayor of Nagasaki;

for Malaysia:	H.E. Mr. Tan Sri Razali Ismail, Ambassador, Permanent Representative of Malaysia to the United Nations, Dato' Mohtar Abdullah, Attorney-General;
for New Zealand:	The Honourable Paul East, Q.C., Attorney-General of New Zealand, Mr. Allan Bracegirdle, Deputy Director of Legal Division of the New Zealand Ministry for Foreign Affairs and Trade;
for the Philippines:	H.E. Mr. Rodolfo S. Sanchez, Ambassador of the Philippines to the Netherlands, Professor Merlin N. Magallona, Dean, College of Law, University of the Philippines;
for Qatar:	H.E. Mr. Najeeb ibn Mohammed Al-Nauimi, Minister of Justice;
for the Russian Federation:	Mr. A. G. Khodakov, Director, Legal Department, Ministry of Foreign Affairs;
for San Marino:	Mrs. Federica Bigi, Embassy Counsellor, Official in Charge of Political Directorate, Department of Foreign Affairs;
for Samoa:	H.E. Mr. Neroni Slade, Ambassador and Permanent Representative of Samoa to the United Nations, Miss Laurence Boisson de Chazournes, Assistant Professor, Graduate Institute of International Studies, Geneva, Mr. Roger S. Clark, Distinguished Professor of Law, Rutgers University School of Law, Camden, New Jersey;
for the Marshall Islands:	The Honourable Theodore G. Kronmiller, Legal Counsel, Embassy of the Marshall Islands to the United States of America, Mrs. Lijon Eknilang, Council Member, Rongelap Atoll Local Government;
for Solomon Islands:	The Honourable Victor Ngele, Minister of Police and National Security, Mr. Jean Salmon, Professor of Law, Université libre de Bruxelles, Mr. Eric David, Professor of Law, Université libre de Bruxelles, Mr. Philippe Sands, Lecturer in Law, School of Oriental and African Studies, London University, and Legal Director, Foundation for International Environmental Law and Development, Mr. James Crawford, Whewell Professor of International Law, University of Cambridge;

for Costa Rica:	Mr. Carlos Vargas-Pizarro, Legal Counsel and Special Envoy of the Government of Costa Rica;
for the United Kingdom of Great Britain and Northern Ireland:	The Rt. Honourable Sir Nicholas Lyell, Q.C., M.P., Her Majesty's Attorney-General;
for the United States of America:	Mr. Conrad K. Harper, Legal Adviser, United States Department of State, Mr. Michael J. Matheson, Principal Deputy Legal Adviser, United States Department of State, Mr. John H. McNeill, Senior Deputy General Counsel, United States Department of Defense;
for Zimbabwe:	Mr. Jonathan Wutawunashe, Chargé d'affaires a.i., Embassy of the Republic of Zimbabwe in the Netherlands.

Questions were put by Members of the Court to particular participants in the oral proceedings, who replied in writing, as requested, within the prescribed time-limits; the Court having decided that the other participants could also reply to those questions on the same terms, several of them did so. Other questions put by Members of the Court were addressed, more generally, to any participant in the oral proceedings; several of them replied in writing, as requested, within the prescribed time-limits.

* * *

10. The Court must first consider whether it has the jurisdiction to give a reply to the request of the General Assembly for an advisory opinion and whether, should the answer be in the affirmative, there is any reason it should decline to exercise any such jurisdiction.

The Court draws its competence in respect of advisory opinions from Article 65, paragraph 1, of its Statute. Under this Article, the Court

> "may give an advisory opinion on any legal question at the request of whatever body may be authorized by or in accordance with the Charter of the United Nations to make such a request".

11. For the Court to be competent to give an advisory opinion, it is thus necessary at the outset for the body requesting the opinion to be "authorized by or in accordance with the Charter of the United Nations to make such a request". The Charter provides in Article 96, paragraph 1, that: "The General Assembly or the Security Council may request the International Court of Justice to give an advisory opinion on any legal question."

Some States which oppose the giving of an opinion by the Court argued that the General Assembly and Security Council are not entitled

to ask for opinions on matters totally unrelated to their work. They suggested that, as in the case of organs and agencies acting under Article 96, paragraph 2, of the Charter, and notwithstanding the difference in wording between that provision and paragraph 1 of the same Article, the General Assembly and Security Council may ask for an advisory opinion on a legal question only within the scope of their activities.

In the view of the Court, it matters little whether this interpretation of Article 96, paragraph 1, is or is not correct; in the present case, the General Assembly has competence in any event to seise the Court. Indeed, Article 10 of the Charter has conferred upon the General Assembly a competence relating to "any questions or any matters" within the scope of the Charter. Article 11 has specifically provided it with a competence to "consider the general principles . . . in the maintenance of international peace and security, including the principles governing disarmament and the regulation of armaments". Lastly, according to Article 13, the General Assembly "shall initiate studies and make recommendations for the purpose of . . . encouraging the progressive development of international law and its codification".

12. The question put to the Court has a relevance to many aspects of the activities and concerns of the General Assembly including those relating to the threat or use of force in international relations, the disarmament process, and the progressive development of international law. The General Assembly has a long-standing interest in these matters and in their relation to nuclear weapons. This interest has been manifested in the annual First Committee debates, and the Assembly resolutions on nuclear weapons; in the holding of three special sessions on disarmament (1978, 1982 and 1988) by the General Assembly, and the annual meetings of the Disarmament Commission since 1978; and also in the commissioning of studies on the effects of the use of nuclear weapons. In this context, it does not matter that important recent and current activities relating to nuclear disarmament are being pursued in other fora.

Finally, Article 96, paragraph 1, of the Charter cannot be read as limiting the ability of the Assembly to request an opinion only in those circumstances in which it can take binding decisions. The fact that the Assembly's activities in the above-mentioned field have led it only to the making of recommendations thus has no bearing on the issue of whether it had the competence to put to the Court the question of which it is seised.

13. The Court must furthermore satisfy itself that the advisory opinion requested does indeed relate to a "legal question" within the meaning of its Statute and the United Nations Charter.

The Court has already had occasion to indicate that questions

> "framed in terms of law and rais[ing] problems of international law . . . are by their very nature susceptible of a reply based on law . . .

> [and] appear . . . to be questions of a legal character" (*Western Sahara, Advisory Opinion, I.C.J. Reports 1975*, p. 18, para. 15).

The question put to the Court by the General Assembly is indeed a legal one, since the Court is asked to rule on the compatibility of the threat or use of nuclear weapons with the relevant principles and rules of international law. To do this, the Court must identify the existing principles and rules, interpret them and apply them to the threat or use of nuclear weapons, thus offering a reply to the question posed based on law.

The fact that this question also has political aspects, as, in the nature of things, is the case with so many questions which arise in international life, does not suffice to deprive it of its character as a "legal question" and to "deprive the Court of a competence expressly conferred on it by its Statute" (*Application for Review of Judgement No. 158 of the United Nations Administrative Tribunal, Advisory Opinion, I.C.J. Reports 1973*, p. 172, para. 14). Whatever its political aspects, the Court cannot refuse to admit the legal character of a question which invites it to discharge an essentially judicial task, namely, an assessment of the legality of the possible conduct of States with regard to the obligations imposed upon them by international law (cf. *Conditions of Admission of a State to Membership in the United Nations (Article 4 of Charter), Advisory Opinion, 1948, I.C.J. Reports 1947-1948*, pp. 61-62; *Competence of the General Assembly for the Admission of a State to the United Nations, Advisory Opinion, I.C.J. Reports 1950*, pp. 6-7; *Certain Expenses of the United Nations (Article 17, paragraph 2, of the Charter), Advisory Opinion, I.C.J. Reports 1962*, p. 155).

Furthermore, as the Court said in the Opinion it gave in 1980 concerning the *Interpretation of the Agreement of 25 March 1951 between the WHO and Egypt:*

> "Indeed, in situations in which political considerations are prominent it may be particularly necessary for an international organization to obtain an advisory opinion from the Court as to the legal principles applicable with respect to the matter under debate . . ." (*I.C.J. Reports 1980*, p. 87, para. 33.)

The Court moreover considers that the political nature of the motives which may be said to have inspired the request and the political implications that the opinion given might have are of no relevance in the establishment of its jurisdiction to give such an opinion.

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14. Article 65, paragraph 1, of the Statute provides: "The Court *may* give an advisory opinion . . ." (Emphasis added.) This is more than an enabling provision. As the Court has repeatedly emphasized, the Statute

leaves a discretion as to whether or not it will give an advisory opinion that has been requested of it, once it has established its competence to do so. In this context, the Court has previously noted as follows:

> "The Court's Opinion is given not to the States, but to the organ which is entitled to request it; the reply of the Court, itself an 'organ of the United Nations', represents its participation in the activities of the Organization, and, in principle, should not be refused." (*Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, First Phase, Advisory Opinion, I.C.J. Reports 1950*, p. 71; see also *Reservations to the Convention on the Prevention and Punishment of the Crime of Genocide, Advisory Opinion, I.C.J. Reports 1951*, p. 19; *Judgments of the Administrative Tribunal of the ILO upon Complaints Made against Unesco, Advisory Opinion, I.C.J. Reports 1956*, p. 86; *Certain Expenses of the United Nations (Article 17, paragraph 2, of the Charter), Advisory Opinion, I.C.J. Reports 1962*, p. 155; and *Applicability of Article VI, Section 22, of the Convention on the Privileges and Immunities of the United Nations, Advisory Opinion, I.C.J. Reports 1989*, p. 189.)

The Court has constantly been mindful of its responsibilities as "the principal judicial organ of the United Nations" (Charter, Art. 92). When considering each request, it is mindful that it should not, in principle, refuse to give an advisory opinion. In accordance with the consistent jurisprudence of the Court, only "compelling reasons" could lead it to such a refusal (*Judgments of the Administrative Tribunal of the ILO upon Complaints Made against Unesco, Advisory Opinion, I.C.J. Reports 1956*, p. 86; *Certain Expenses of the United Nations (Article 17, paragraph 2, of the Charter), Advisory Opinion, I.C.J. Reports 1962*, p. 155; *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971*, p. 27; *Application for Review of Judgement No. 158 of the United Nations Administrative Tribunal, Advisory Opinion, I.C.J. Reports 1973*, p. 183; *Western Sahara, Advisory Opinion, I.C.J. Reports 1975*, p. 21; and *Applicability of Article VI, Section 22, of the Convention on the Privileges and Immunities of the United Nations, Advisory Opinion, I.C.J. Reports 1989*, p. 191). There has been no refusal, based on the discretionary power of the Court, to act upon a request for advisory opinion in the history of the present Court; in the case concerning the *Legality of the Use by a State of Nuclear Weapons in Armed Conflict*, the refusal to give the World Health Organization the advisory opinion requested by it was justified by the Court's lack of jurisdiction in that case. The Permanent Court of International Justice took the view on only one occasion that it could not reply to a question put to it, having regard to the very particular circumstances of the case, among which were that the question directly concerned an already existing dispute, one of the States parties to which was

neither a party to the Statute of the Permanent Court nor a Member of the League of Nations, objected to the proceedings, and refused to take part in any way *(Status of Eastern Carelia, P.C.I.J., Series B, No. 5)*.

15. Most of the reasons adduced in these proceedings in order to persuade the Court that in the exercise of its discretionary power it should decline to render the opinion requested by General Assembly resolution 49/75 K were summarized in the following statement made by one State in the written proceedings:

> "The question presented is vague and abstract, addressing complex issues which are the subject of consideration among interested States and within other bodies of the United Nations which have an express mandate to address these matters. An opinion by the Court in regard to the question presented would provide no practical assistance to the General Assembly in carrying out its functions under the Charter. Such an opinion has the potential of undermining progress already made or being made on this sensitive subject and, therefore, is contrary to the interests of the United Nations Organization." (United States of America, Written Statement, pp. 1-2; cf. pp. 3-7, II. See also United Kingdom, Written Statement, pp. 9-20, paras. 2.23-2.45; France, Written Statement, pp. 13-20, paras. 5-9; Finland, Written Statement, pp. 1-2; Netherlands, Written Statement, pp. 3-4, paras. 6-13; Germany, Written Statement, pp. 3-6, para. 2 *(b)*.)

In contending that the question put to the Court is vague and abstract, some States appeared to mean by this that there exists no specific dispute on the subject-matter of the question. In order to respond to this argument, it is necessary to distinguish between requirements governing contentious procedure and those applicable to advisory opinions. The purpose of the advisory function is not to settle — at least directly — disputes between States, but to offer legal advice to the organs and institutions requesting the opinion (cf. *Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, First Phase, Advisory Opinion, I.C.J. Reports 1950*, p. 71). The fact that the question put to the Court does not relate to a specific dispute should consequently not lead the Court to decline to give the opinion requested.

Moreover, it is the clear position of the Court that to contend that it should not deal with a question couched in abstract terms is "a mere affirmation devoid of any justification", and that "the Court may give an advisory opinion on any legal question, abstract or otherwise" (*Conditions of Admission of a State to Membership in the United Nations (Article 4 of Charter), Advisory Opinion, 1948, I.C.J. Reports 1947-1948*, p. 61; see also *Effect of Awards of Compensation Made by the United Nations Administrative Tribunal, Advisory Opinion, I.C.J. Reports 1954*, p. 51; and *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971*, p. 27, para. 40).

Certain States have however expressed the fear that the abstract nature of the question might lead the Court to make hypothetical or speculative declarations outside the scope of its judicial function. The Court does not consider that, in giving an advisory opinion in the present case, it would necessarily have to write "scenarios", to study various types of nuclear weapons and to evaluate highly complex and controversial technological, strategic and scientific information. The Court will simply address the issues arising in all their aspects by applying the legal rules relevant to the situation.

16. Certain States have observed that the General Assembly has not explained to the Court for what precise purposes it seeks the advisory opinion. Nevertheless, it is not for the Court itself to purport to decide whether or not an advisory opinion is needed by the Assembly for the performance of its functions. The General Assembly has the right to decide for itself on the usefulness of an opinion in the light of its own needs.

Equally, once the Assembly has asked, by adopting a resolution, for an advisory opinion on a legal question, the Court, in determining whether there are any compelling reasons for it to refuse to give such an opinion, will not have regard to the origins or to the political history of the request, or to the distribution of votes in respect of the adopted resolution.

17. It has also been submitted that a reply from the Court in this case might adversely affect disarmament negotiations and would, therefore, be contrary to the interest of the United Nations. The Court is aware that, no matter what might be its conclusions in any opinion it might give, they would have relevance for the continuing debate on the matter in the General Assembly and would present an additional element in the negotiations on the matter. Beyond that, the effect of the opinion is a matter of appreciation. The Court has heard contrary positions advanced and there are no evident criteria by which it can prefer one assessment to another. That being so, the Court cannot regard this factor as a compelling reason to decline to exercise its jurisdiction.

18. Finally, it has been contended by some States that in answering the question posed, the Court would be going beyond its judicial role and would be taking upon itself a law-making capacity. It is clear that the Court cannot legislate, and, in the circumstances of the present case, it is not called upon to do so. Rather its task is to engage in its normal judicial function of ascertaining the existence or otherwise of legal principles and rules applicable to the threat or use of nuclear weapons. The contention that the giving of an answer to the question posed would require the Court to legislate is based on a supposition that the present *corpus juris* is devoid of relevant rules in this matter. The Court could not accede to this argument; it states the existing law and does not legislate. This is so even if, in stating and applying the law, the Court necessarily has to specify its scope and sometimes note its general trend.

19. In view of what is stated above, the Court concludes that it has the authority to deliver an opinion on the question posed by the General Assembly, and that there exist no "compelling reasons" which would lead the Court to exercise its discretion not to do so.

An entirely different question is whether the Court, under the constraints placed upon it as a judicial organ, will be able to give a complete answer to the question asked of it. However, that is a different matter from a refusal to answer at all.

* * *

20. The Court must next address certain matters arising in relation to the formulation of the question put to it by the General Assembly. The English text asks: "Is the threat or use of nuclear weapons in any circumstance permitted under international law?" The French text of the question reads as follows: "Est-il permis en droit international de recourir à la menace ou à l'emploi d'armes nucléaires en toute circonstance?" It was suggested that the Court was being asked by the General Assembly whether it was permitted to have recourse to nuclear weapons in every circumstance, and it was contended that such a question would inevitably invite a simple negative answer.

The Court finds it unnecessary to pronounce on the possible divergences between the English and French texts of the question posed. Its real objective is clear: to determine the legality or illegality of the threat or use of nuclear weapons.

21. The use of the word "permitted" in the question put by the General Assembly was criticized before the Court by certain States on the ground that this implied that the threat or the use of nuclear weapons would only be permissible if authorization could be found in a treaty provision or in customary international law. Such a starting point, those States submitted, was incompatible with the very basis of international law, which rests upon the principles of sovereignty and consent; accordingly, and contrary to what was implied by use of the word "permitted", States are free to threaten or use nuclear weapons unless it can be shown that they are bound not to do so by reference to a prohibition in either treaty law or customary international law. Support for this contention was found in dicta of the Permanent Court of International Justice in the *"Lotus"* case that "restrictions upon the independence of States cannot . . . be presumed" and that international law leaves to States "a wide measure of discretion which is only limited in certain cases by prohibitive rules" (*P.C.I.J., Series A, No. 10,* pp. 18 and 19). Reliance was also placed on the dictum of the present Court in the case concerning *Military and Paramilitary Activities in and against Nicaragua (Nicaragua* v. *United States of America)* that:

> "in international law there are no rules, other than such rules as may be accepted by the State concerned, by treaty or otherwise, whereby

the level of armaments of a sovereign State can be limited" (*I.C.J. Reports 1986*, p. 135, para. 269).

For other States, the invocation of these dicta in the *"Lotus"* case was inapposite; their status in contemporary international law and applicability in the very different circumstances of the present case were challenged. It was also contended that the above-mentioned dictum of the present Court was directed to the *possession* of armaments and was irrelevant to the threat or use of nuclear weapons.

Finally, it was suggested that, were the Court to answer the question put by the Assembly, the word "permitted" should be replaced by "prohibited".

22. The Court notes that the nuclear-weapon States appearing before it either accepted, or did not dispute, that their independence to act was indeed restricted by the principles and rules of international law, more particularly humanitarian law (see below, paragraph 86), as did the other States which took part in the proceedings.

Hence, the argument concerning the legal conclusions to be drawn from the use of the word "permitted", and the questions of burden of proof to which it was said to give rise, are without particular significance for the disposition of the issues before the Court.

* *

23. In seeking to answer the question put to it by the General Assembly, the Court must decide, after consideration of the great corpus of international law norms available to it, what might be the relevant applicable law.

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24. Some of the proponents of the illegality of the use of nuclear weapons have argued that such use would violate the right to life as guaranteed in Article 6 of the International Covenant on Civil and Political Rights, as well as in certain regional instruments for the protection of human rights. Article 6, paragraph 1, of the International Covenant provides as follows: "Every human being has the inherent right to life. This right shall be protected by law. No one shall be arbitrarily deprived of his life."

In reply, others contended that the International Covenant on Civil and Political Rights made no mention of war or weapons, and it had never been envisaged that the legality of nuclear weapons was regulated by that instrument. It was suggested that the Covenant was directed to the protection of human rights in peacetime, but that questions relating to unlawful loss of life in hostilities were governed by the law applicable in armed conflict.

25. The Court observes that the protection of the International Covenant of Civil and Political Rights does not cease in times of war, except by operation of Article 4 of the Covenant whereby certain provisions may be derogated from in a time of national emergency. Respect for the right to life is not, however, such a provision. In principle, the right not arbitrarily to be deprived of one's life applies also in hostilities. The test of what is an arbitrary deprivation of life, however, then falls to be determined by the applicable *lex specialis*, namely, the law applicable in armed conflict which is designed to regulate the conduct of hostilities. Thus whether a particular loss of life, through the use of a certain weapon in warfare, is to be considered an arbitrary deprivation of life contrary to Article 6 of the Covenant, can only be decided by reference to the law applicable in armed conflict and not deduced from the terms of the Covenant itself.

26. Some States also contended that the prohibition against genocide, contained in the Convention of 9 December 1948 on the Prevention and Punishment of the Crime of Genocide, is a relevant rule of customary international law which the Court must apply. The Court recalls that in Article II of the Convention genocide is defined as

> "any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such:
> *(a)* Killing members of the group;
> *(b)* Causing serious bodily or mental harm to members of the group;
> *(c)* Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part;
> *(d)* Imposing measures intended to prevent births within the group;
> *(e)* Forcibly transferring children of the group to another group."

It was maintained before the Court that the number of deaths occasioned by the use of nuclear weapons would be enormous; that the victims could, in certain cases, include persons of a particular national, ethnic, racial or religious group; and that the intention to destroy such groups could be inferred from the fact that the user of the nuclear weapon would have omitted to take account of the well-known effects of the use of such weapons.

The Court would point out in that regard that the prohibition of genocide would be pertinent in this case if the recourse to nuclear weapons did indeed entail the element of intent, towards a group as such, required by the provision quoted above. In the view of the Court, it would only be possible to arrive at such a conclusion after having taken due account of the circumstances specific to each case.

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27. In both their written and oral statements, some States furthermore argued that any use of nuclear weapons would be unlawful by reference to existing norms relating to the safeguarding and protection of the environment, in view of their essential importance.

Specific references were made to various existing international treaties and instruments. These included Additional Protocol I of 1977 to the Geneva Conventions of 1949, Article 35, paragraph 3, of which prohibits the employment of "methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment"; and the Convention of 18 May 1977 on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, which prohibits the use of weapons which have "widespread, long-lasting or severe effects" on the environment (Art. 1). Also cited were Principle 21 of the Stockholm Declaration of 1972 and Principle 2 of the Rio Declaration of 1992 which express the common conviction of the States concerned that they have a duty

> "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".

These instruments and other provisions relating to the protection and safeguarding of the environment were said to apply at all times, in war as well as in peace, and it was contended that they would be violated by the use of nuclear weapons whose consequences would be widespread and would have transboundary effects.

28. Other States questioned the binding legal quality of these precepts of environmental law; or, in the context of the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, denied that it was concerned at all with the use of nuclear weapons in hostilities; or, in the case of Additional Protocol I, denied that they were generally bound by its terms, or recalled that they had reserved their position in respect of Article 35, paragraph 3, thereof.

It was also argued by some States that the principal purpose of environmental treaties and norms was the protection of the environment in time of peace. It was said that those treaties made no mention of nuclear weapons. It was also pointed out that warfare in general, and nuclear warfare in particular, were not mentioned in their texts and that it would be destabilizing to the rule of law and to confidence in international negotiations if those treaties were now interpreted in such a way as to prohibit the use of nuclear weapons.

29. The Court recognizes that the environment is under daily threat and that the use of nuclear weapons could constitute a catastrophe for the environment. The Court also recognizes that the environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn. The

existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment.

30. However, the Court is of the view that the issue is not whether the treaties relating to the protection of the environment are or are not applicable during an armed conflict, but rather whether the obligations stemming from these treaties were intended to be obligations of total restraint during military conflict.

The Court does not consider that the treaties in question could have intended to deprive a State of the exercise of its right of self-defence under international law because of its obligations to protect the environment. Nonetheless, States must take environmental considerations into account when assessing what is necessary and proportionate in the pursuit of legitimate military objectives. Respect for the environment is one of the elements that go to assessing whether an action is in conformity with the principles of necessity and proportionality.

This approach is supported, indeed, by the terms of Principle 24 of the Rio Declaration, which provides that:

> "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."

31. The Court notes furthermore that Articles 35, paragraph 3, and 55 of Additional Protocol I provide additional protection for the environment. Taken together, these provisions embody a general obligation to protect the natural environment against widespread, long-term and severe environmental damage; the prohibition of methods and means of warfare which are intended, or may be expected, to cause such damage; and the prohibition of attacks against the natural environment by way of reprisals.

These are powerful constraints for all the States having subscribed to these provisions.

32. General Assembly resolution 47/37 of 25 November 1992 on the "Protection of the Environment in Times of Armed Conflict" is also of interest in this context. It affirms the general view according to which environmental considerations constitute one of the elements to be taken into account in the implementation of the principles of the law applicable in armed conflict: it states that "destruction of the environment, not justified by military necessity and carried out wantonly, is clearly contrary to existing international law". Addressing the reality that certain instruments are not yet binding on all States, the General Assembly in this resolution "*[a]ppeals* to all States that have not yet done so to consider becoming parties to the relevant international conventions".

In its recent Order in the *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the* Nuclear Tests (New Zealand *v.* France) *Case*, the Court stated that its conclusion was "without prejudice to the obligations of States to respect and protect the natural environment" (*Order of 22 September 1995, I.C.J. Reports 1995*, p. 306, para. 64). Although that statement was made in the context of nuclear testing, it naturally also applies to the actual use of nuclear weapons in armed conflict.

33. The Court thus finds that while the existing international law relating to the protection and safeguarding of the environment does not specifically prohibit the use of nuclear weapons, it indicates important environmental factors that are properly to be taken into account in the context of the implementation of the principles and rules of the law applicable in armed conflict.

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34. In the light of the foregoing the Court concludes that the most directly relevant applicable law governing the question of which it was seised, is that relating to the use of force enshrined in the United Nations Charter and the law applicable in armed conflict which regulates the conduct of hostilities, together with any specific treaties on nuclear weapons that the Court might determine to be relevant.

* *

35. In applying this law to the present case, the Court cannot however fail to take into account certain unique characteristics of nuclear weapons.

The Court has noted the definitions of nuclear weapons contained in various treaties and accords. It also notes that nuclear weapons are explosive devices whose energy results from the fusion or fission of the atom. By its very nature, that process, in nuclear weapons as they exist today, releases not only immense quantities of heat and energy, but also powerful and prolonged radiation. According to the material before the Court, the first two causes of damage are vastly more powerful than the damage caused by other weapons, while the phenomenon of radiation is said to be peculiar to nuclear weapons. These characteristics render the nuclear weapon potentially catastrophic. The destructive power of nuclear weapons cannot be contained in either space or time. They have the potential to destroy all civilization and the entire ecosystem of the planet.

The radiation released by a nuclear explosion would affect health, agriculture, natural resources and demography over a very wide area.

Further, the use of nuclear weapons would be a serious danger to future generations. Ionizing radiation has the potential to damage the future environment, food and marine ecosystem, and to cause genetic defects and illness in future generations.

36. In consequence, in order correctly to apply to the present case the Charter law on the use of force and the law applicable in armed conflict, in particular humanitarian law, it is imperative for the Court to take account of the unique characteristics of nuclear weapons, and in particular their destructive capacity, their capacity to cause untold human suffering, and their ability to cause damage to generations to come.

* * *

37. The Court will now address the question of the legality or illegality of recourse to nuclear weapons in the light of the provisions of the Charter relating to the threat or use of force.

38. The Charter contains several provisions relating to the threat and use of force. In Article 2, paragraph 4, the threat or use of force against the territorial integrity or political independence of another State or in any other manner inconsistent with the purposes of the United Nations is prohibited. That paragraph provides:

> "All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any State, or in any other manner inconsistent with the Purposes of the United Nations."

This prohibition of the use of force is to be considered in the light of other relevant provisions of the Charter. In Article 51, the Charter recognizes the inherent right of individual or collective self-defence if an armed attack occurs. A further lawful use of force is envisaged in Article 42, whereby the Security Council may take military enforcement measures in conformity with Chapter VII of the Charter.

39. These provisions do not refer to specific weapons. They apply to any use of force, regardless of the weapons employed. The Charter neither expressly prohibits, nor permits, the use of any specific weapon, including nuclear weapons. A weapon that is already unlawful *per se*, whether by treaty or custom, does not become lawful by reason of its being used for a legitimate purpose under the Charter.

40. The entitlement to resort to self-defence under Article 51 is subject to certain constraints. Some of these constraints are inherent in the very concept of self-defence. Other requirements are specified in Article 51.

41. The submission of the exercise of the right of self-defence to the conditions of necessity and proportionality is a rule of customary international law. As the Court stated in the case concerning *Military and Paramilitary Activities in and against Nicaragua (Nicaragua* v. *United States of America)*: there is a "specific rule whereby self-defence would warrant only measures which are proportional to the armed attack and necessary to respond to it, a rule well established in customary international law" *(I.C.J. Reports 1986*, p. 94, para. 176). This dual condition applies equally to Article 51 of the Charter, whatever the means of force employed.

42. The proportionality principle may thus not in itself exclude the use of nuclear weapons in self-defence in all circumstances. But at the same time, a use of force that is proportionate under the law of self-defence, must, in order to be lawful, also meet the requirements of the law applicable in armed conflict which comprise in particular the principles and rules of humanitarian law.

43. Certain States have in their written and oral pleadings suggested that in the case of nuclear weapons, the condition of proportionality must be evaluated in the light of still further factors. They contend that the very nature of nuclear weapons, and the high probability of an escalation of nuclear exchanges, mean that there is an extremely strong risk of devastation. The risk factor is said to negate the possibility of the condition of proportionality being complied with. The Court does not find it necessary to embark upon the quantification of such risks; nor does it need to enquire into the question whether tactical nuclear weapons exist which are sufficiently precise to limit those risks: it suffices for the Court to note that the very nature of all nuclear weapons and the profound risks associated therewith are further considerations to be borne in mind by States believing they can exercise a nuclear response in self-defence in accordance with the requirements of proportionality.

44. Beyond the conditions of necessity and proportionality, Article 51 specifically requires that measures taken by States in the exercise of the right of self-defence shall be immediately reported to the Security Council; this article further provides that these measures shall not in any way affect the authority and responsibility of the Security Council under the Charter to take at any time such action as it deems necessary in order to maintain or restore international peace and security. These requirements of Article 51 apply whatever the means of force used in self-defence.

45. The Court notes that the Security Council adopted on 11 April 1995, in the context of the extension of the Treaty on the Non-Proliferation of Nuclear Weapons, resolution 984 (1995) by the terms of which, on the one hand, it

> "*[t]akes note* with appreciation of the statements made by each of the nuclear-weapon States (S/1995/261, S/1995/262, S/1995/263, S/1995/264, S/1995/265), in which they give security assurances

> against the use of nuclear weapons to non-nuclear-weapon States that are Parties to the Treaty on the Non-Proliferation of Nuclear Weapons",

and, on the other hand, it

> "*[w]elcomes* the intention expressed by certain States that they will provide or support immediate assistance, in accordance with the Charter, to any non-nuclear-weapon State Party to the Treaty on the Non-Proliferation of Nuclear Weapons that is a victim of an act of, or an object of a threat of, aggression in which nuclear weapons are used".

46. Certain States asserted that the use of nuclear weapons in the conduct of reprisals would be lawful. The Court does not have to examine, in this context, the question of armed reprisals in time of peace, which are considered to be unlawful. Nor does it have to pronounce on the question of belligerent reprisals save to observe that in any case any right of recourse to such reprisals would, like self-defence, be governed *inter alia* by the principle of proportionality.

47. In order to lessen or eliminate the risk of unlawful attack, States sometimes signal that they possess certain weapons to use in self-defence against any State violating their territorial integrity or political independence. Whether a signalled intention to use force if certain events occur is or is not a "threat" within Article 2, paragraph 4, of the Charter depends upon various factors. If the envisaged use of force is itself unlawful, the stated readiness to use it would be a threat prohibited under Article 2, paragraph 4. Thus it would be illegal for a State to threaten force to secure territory from another State, or to cause it to follow or not follow certain political or economic paths. The notions of "threat" and "use" of force under Article 2, paragraph 4, of the Charter stand together in the sense that if the use of force itself in a given case is illegal — for whatever reason — the threat to use such force will likewise be illegal. In short, if it is to be lawful, the declared readiness of a State to use force must be a use of force that is in conformity with the Charter. For the rest, no State — whether or not it defended the policy of deterrence — suggested to the Court that it would be lawful to threaten to use force if the use of force contemplated would be illegal.

48. Some States put forward the argument that possession of nuclear weapons is itself an unlawful threat to use force. Possession of nuclear weapons may indeed justify an inference of preparedness to use them. In order to be effective, the policy of deterrence, by which those States possessing or under the umbrella of nuclear weapons seek to discourage military aggression by demonstrating that it will serve no purpose, necessitates that the intention to use nuclear weapons be credible. Whether this

is a "threat" contrary to Article 2, paragraph 4, depends upon whether the particular use of force envisaged would be directed against the territorial integrity or political independence of a State, or against the Purposes of the United Nations or whether, in the event that it were intended as a means of defence, it would necessarily violate the principles of necessity and proportionality. In any of these circumstances the use of force, and the threat to use it, would be unlawful under the law of the Charter.

49. Moreover, the Security Council may take enforcement measures under Chapter VII of the Charter. From the statements presented to it the Court does not consider it necessary to address questions which might, in a given case, arise from the application of Chapter VII.

50. The terms of the question put to the Court by the General Assembly in resolution 49/75 K could in principle also cover a threat or use of nuclear weapons by a State within its own boundaries. However, this particular aspect has not been dealt with by any of the States which addressed the Court orally or in writing in these proceedings. The Court finds that it is not called upon to deal with an internal use of nuclear weapons.

* * *

51. Having dealt with the Charter provisions relating to the threat or use of force, the Court will now turn to the law applicable in situations of armed conflict. It will first address the question whether there are specific rules in international law regulating the legality or illegality of recourse to nuclear weapons *per se*; it will then examine the question put to it in the light of the law applicable in armed conflict proper, i.e. the principles and rules of humanitarian law applicable in armed conflict, and the law of neutrality.

* *

52. The Court notes by way of introduction that international customary and treaty law does not contain any specific prescription authorizing the threat or use of nuclear weapons or any other weapon in general or in certain circumstances, in particular those of the exercise of legitimate self-defence. Nor, however, is there any principle or rule of international law which would make the legality of the threat or use of nuclear weapons or of any other weapons dependent on a specific authorization. State practice shows that the illegality of the use of certain weapons as such does not result from an absence of authorization but, on the contrary, is formulated in terms of prohibition.

*

53. The Court must therefore now examine whether there is any prohibition of recourse to nuclear weapons as such; it will first ascertain whether there is a conventional prescription to this effect.

54. In this regard, the argument has been advanced that nuclear weapons should be treated in the same way as poisoned weapons. In that case, they would be prohibited under:

(a) the Second Hague Declaration of 29 July 1899, which prohibits "the use of projectiles the object of which is the diffusion of asphyxiating or deleterious gases";
(b) Article 23 *(a)* of the Regulations respecting the laws and customs of war on land annexed to the Hague Convention IV of 18 October 1907, whereby "it is especially forbidden: . . . to employ poison or poisoned weapons"; and
(c) the Geneva Protocol of 17 June 1925 which prohibits "the use in war of asphyxiating, poisonous or other gases, and of all analogous liquids, materials or devices".

55. The Court will observe that the Regulations annexed to the Hague Convention IV do not define what is to be understood by "poison or poisoned weapons" and that different interpretations exist on the issue. Nor does the 1925 Protocol specify the meaning to be given to the term "analogous materials or devices". The terms have been understood, in the practice of States, in their ordinary sense as covering weapons whose prime, or even exclusive, effect is to poison or asphyxiate. This practice is clear, and the parties to those instruments have not treated them as referring to nuclear weapons.

56. In view of this, it does not seem to the Court that the use of nuclear weapons can be regarded as specifically prohibited on the basis of the above-mentioned provisions of the Second Hague Declaration of 1899, the Regulations annexed to the Hague Convention IV of 1907 or the 1925 Protocol (see paragraph 54 above).

57. The pattern until now has been for weapons of mass destruction to be declared illegal by specific instruments. The most recent such instruments are the Convention of 10 April 1972 on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction — which prohibits the possession of bacteriological and toxic weapons and reinforces the prohibition of their use — and the Convention of 13 January 1993 on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction — which prohibits all use of chemical weapons and requires the destruction of existing stocks. Each of these instruments has been negotiated and adopted in its own context and for its own reasons. The Court does not find any specific prohibition of recourse to nuclear weapons in treaties expressly prohibiting the use of certain weapons of mass destruction.

58. In the last two decades, a great many negotiations have been conducted regarding nuclear weapons; they have not resulted in a treaty of

general prohibition of the same kind as for bacteriological and chemical weapons. However, a number of specific treaties have been concluded in order to limit:

(a) the acquisition, manufacture and possession of nuclear weapons (Peace Treaties of 10 February 1947; State Treaty for the Re-establishment of an Independent and Democratic Austria of 15 May 1955; Treaty of Tlatelolco of 14 February 1967 for the Prohibition of Nuclear Weapons in Latin America, and its Additional Protocols; Treaty of 1 July 1968 on the Non-Proliferation of Nuclear Weapons; Treaty of Rarotonga of 6 August 1985 on the Nuclear-Weapon-Free Zone of the South Pacific, and its Protocols; Treaty of 12 September 1990 on the Final Settlement with respect to Germany);
(b) the deployment of nuclear weapons (Antarctic Treaty of 1 December 1959; Treaty of 27 January 1967 on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies; Treaty of Tlatelolco of 14 February 1967 for the Prohibition of Nuclear Weapons in Latin America, and its Additional Protocols; Treaty of 11 February 1971 on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea-Bed and the Ocean Floor and in the Subsoil Thereof; Treaty of Rarotonga of 6 August 1985 on the Nuclear-Weapon-Free Zone of the South Pacific, and its Protocols); and
(c) the testing of nuclear weapons (Antarctic Treaty of 1 December 1959; Treaty of 5 August 1963 Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water; Treaty of 27 January 1967 on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies; Treaty of Tlatelolco of 14 February 1967 for the Prohibition of Nuclear Weapons in Latin America, and its Additional Protocols; Treaty of Rarotonga of 6 August 1985 on the Nuclear-Weapon-Free Zone of the South Pacific, and its Protocols).

59. Recourse to nuclear weapons is directly addressed by two of these Conventions and also in connection with the indefinite extension of the Treaty on the Non-Proliferation of Nuclear Weapons of 1968:

(a) the Treaty of Tlatelolco of 14 February 1967 for the Prohibition of Nuclear Weapons in Latin America prohibits, in Article 1, the use of nuclear weapons by the Contracting Parties. It further includes an Additional Protocol II open to nuclear-weapon States outside the region, Article 3 of which provides:

> "The Governments represented by the undersigned Plenipotentiaries also undertake not to use or threaten to use nuclear weapons against the Contracting Parties of the Treaty for the Prohibition of Nuclear Weapons in Latin America."

The Protocol was signed and ratified by the five nuclear-weapon States. Its ratification was accompanied by a variety of declarations. The United Kingdom Government, for example, stated that "in the event of any act of aggression by a Contracting Party to the Treaty in which that Party was supported by a nuclear-weapon State", the United Kingdom Government would "be free to reconsider the extent to which they could be regarded as committed by the provisions of Additional Protocol II". The United States made a similar statement. The French Government, for its part, stated that it "interprets the undertaking made in article 3 of the Protocol as being without prejudice to the full exercise of the right of self-defence confirmed by Article 51 of the Charter". China reaffirmed its commitment not to be the first to make use of nuclear weapons. The Soviet Union reserved "the right to review" the obligations imposed upon it by Additional Protocol II, particularly in the event of an attack by a State party either "in support of a nuclear-weapon State or jointly with that State". None of these statements drew comment or objection from the parties to the Treaty of Tlatelolco.

(b) the Treaty of Rarotonga of 6 August 1985 establishes a South Pacific Nuclear Free Zone in which the Parties undertake not to manufacture, acquire or possess any nuclear explosive device (Art. 3). Unlike the Treaty of Tlatelolco, the Treaty of Rarotonga does not expressly prohibit the use of such weapons. But such a prohibition is for the States parties the necessary consequence of the prohibitions stipulated by the Treaty. The Treaty has a number of protocols. Protocol 2, open to the five nuclear-weapon States, specifies in its Article 1 that:

> "Each Party undertakes not to use or threaten to use any nuclear explosive device against:
>
> *(a)* Parties to the Treaty; or
>
> *(b)* any territory within the South Pacific Nuclear Free Zone for which a State that has become a Party to Protocol 1 is internationally responsible."

China and Russia are parties to that Protocol. In signing it, China and the Soviet Union each made a declaration by which they reserved the "right to reconsider" their obligations under the said Protocol; the Soviet Union also referred to certain circumstances in which it would consider itself released from those obligations. France, the United Kingdom and the United States, for their part, signed Protocol 2 on 25 March 1996, but have not yet ratified it. On that occasion, France declared, on the one hand, that no provision in that Protocol "shall impair the full exercise of the inherent right of self-defence provided for in Article 51 of the . . . Charter" and, on the other hand, that "the commitment set out in Article 1 of [that] Protocol amounts to the negative security assurances given by France to

non-nuclear-weapon States which are parties to the Treaty on . . . Non-Proliferation", and that "these assurances shall not apply to States which are not parties" to that Treaty. For its part, the United Kingdom made a declaration setting out the precise circumstances in which it "will not be bound by [its] undertaking under Article 1" of the Protocol.

(c) as to the Treaty on the Non-Proliferation of Nuclear Weapons, at the time of its signing in 1968 the United States, the United Kingdom and the USSR gave various security assurances to the non-nuclear-weapon States that were parties to the Treaty. In resolution 255 (1968) the Security Council took note with satisfaction of the intention expressed by those three States to

> "provide or support immediate assistance, in accordance with the Charter, to any non-nuclear-weapon State Party to the Treaty on the Non-Proliferation . . . that is a victim of an act of, or an object of a threat of, aggression in which nuclear weapons are used".

On the occasion of the extension of the Treaty in 1995, the five nuclear-weapon States gave their non-nuclear-weapon partners, by means of separate unilateral statements on 5 and 6 April 1995, positive and negative security assurances against the use of such weapons. All the five nuclear-weapon States first undertook not to use nuclear weapons against non-nuclear-weapon States that were parties to the Treaty on the Non-Proliferation of Nuclear Weapons. However, these States, apart from China, made an exception in the case of an invasion or any other attack against them, their territories, armed forces or allies, or on a State towards which they had a security commitment, carried out or sustained by a non-nuclear-weapon State party to the Non-Proliferation Treaty in association or alliance with a nuclear-weapon State. Each of the nuclear-weapon States further undertook, as a permanent member of the Security Council, in the event of an attack with the use of nuclear weapons, or threat of such attack, against a non-nuclear-weapon State, to refer the matter to the Security Council without delay and to act within it in order that it might take immediate measures with a view to supplying, pursuant to the Charter, the necessary assistance to the victim State (the commitments assumed comprising minor variations in wording). The Security Council, in unanimously adopting resolution 984 (1995) of 11 April 1995, cited above, took note of those statements with appreciation. It also recognized

> "that the nuclear-weapon State permanent members of the Security Council will bring the matter immediately to the attention of the Council and seek Council action to provide, in accordance with the Charter, the necessary assistance to the State victim";

and welcomed the fact that

> "the intention expressed by certain States that they will provide or support immediate assistance, in accordance with the Charter, to any non-nuclear-weapon State Party to the Treaty on the Non-Proliferation of Nuclear Weapons that is a victim of an act of, or an object of a threat of, aggression in which nuclear weapons are used".

60. Those States that believe that recourse to nuclear weapons is illegal stress that the conventions that include various rules providing for the limitation or elimination of nuclear weapons in certain areas (such as the Antarctic Treaty of 1959 which prohibits the deployment of nuclear weapons in the Antarctic, or the Treaty of Tlatelolco of 1967 which creates a nuclear-weapon-free zone in Latin America) or the conventions that apply certain measures of control and limitation to the existence of nuclear weapons (such as the 1963 Partial Test-Ban Treaty or the Treaty on the Non-Proliferation of Nuclear Weapons) all set limits to the use of nuclear weapons. In their view, these treaties bear witness, in their own way, to the emergence of a rule of complete legal prohibition of all uses of nuclear weapons.

61. Those States who defend the position that recourse to nuclear weapons is legal in certain circumstances see a logical contradiction in reaching such a conclusion. According to them, those Treaties, such as the Treaty on the Non-Proliferation of Nuclear Weapons, as well as Security Council resolutions 255 (1968) and 984 (1995) which take note of the security assurances given by the nuclear-weapon States to the non-nuclear-weapon States in relation to any nuclear aggression against the latter, cannot be understood as prohibiting the use of nuclear weapons, and such a claim is contrary to the very text of those instruments. For those who support the legality in certain circumstances of recourse to nuclear weapons, there is no absolute prohibition against the use of such weapons. The very logic and construction of the Treaty on the Non-Proliferation of Nuclear Weapons, they assert, confirm this. This Treaty, whereby, they contend, the possession of nuclear weapons by the five nuclear-weapon States has been accepted, cannot be seen as a treaty banning their use by those States; to accept the fact that those States possess nuclear weapons is tantamount to recognizing that such weapons may be used in certain circumstances. Nor, they contend, could the security assurances given by the nuclear-weapon States in 1968, and more recently in connection with the Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons in 1995, have been conceived without its being supposed that there were circumstances in which nuclear weapons could be used in a lawful manner. For those who defend the legality of the use, in certain circumstances, of nuclear weapons, the acceptance of those instruments by the different non-nuclear-weapon States confirms and reinforces the evident logic upon which those instruments are based.

62. The Court notes that the treaties dealing exclusively with acquisition, manufacture, possession, deployment and testing of nuclear weapons, without specifically addressing their threat or use, certainly point to an increasing concern in the international community with these weapons; the Court concludes from this that these treaties could therefore be seen as foreshadowing a future general prohibition of the use of such weapons, but they do not constitute such a prohibition by themselves. As to the treaties of Tlatelolco and Rarotonga and their Protocols, and also the declarations made in connection with the indefinite extension of the Treaty on the Non-Proliferation of Nuclear Weapons, it emerges from these instruments that:

(a) a number of States have undertaken not to use nuclear weapons in specific zones (Latin America; the South Pacific) or against certain other States (non-nuclear-weapon States which are parties to the Treaty on the Non-Proliferation of Nuclear Weapons);
(b) nevertheless, even within this framework, the nuclear-weapon States have reserved the right to use nuclear weapons in certain circumstances; and
(c) these reservations met with no objection from the parties to the Tlatelolco or Rarotonga Treaties or from the Security Council.

63. These two treaties, the security assurances given in 1995 by the nuclear-weapon States and the fact that the Security Council took note of them with satisfaction, testify to a growing awareness of the need to liberate the community of States and the international public from the dangers resulting from the existence of nuclear weapons. The Court moreover notes the signing, even more recently, on 15 December 1995, at Bangkok, of a Treaty on the Southeast Asia Nuclear-Weapon-Free Zone, and on 11 April 1996, at Cairo, of a treaty on the creation of a nuclear-weapons-free zone in Africa. It does not, however, view these elements as amounting to a comprehensive and universal conventional prohibition on the use, or the threat of use, of those weapons as such.

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64. The Court will now turn to an examination of customary international law to determine whether a prohibition of the threat or use of nuclear weapons as such flows from that source of law. As the Court has stated, the substance of that law must be "looked for primarily in the actual practice and *opinio juris* of States" (*Continental Shelf (Libyan Arab Jamahiriya/Malta), Judgment, I.C.J. Reports 1985*, p. 29, para. 27).

65. States which hold the view that the use of nuclear weapons is illegal have endeavoured to demonstrate the existence of a customary rule prohibiting this use. They refer to a consistent practice of non-utilization of nuclear weapons by States since 1945 and they would see in that prac-

tice the expression of an *opinio juris* on the part of those who possess such weapons.

66. Some other States, which assert the legality of the threat and use of nuclear weapons in certain circumstances, invoked the doctrine and practice of deterrence in support of their argument. They recall that they have always, in concert with certain other States, reserved the right to use those weapons in the exercise of the right to self-defence against an armed attack threatening their vital security interests. In their view, if nuclear weapons have not been used since 1945, it is not on account of an existing or nascent custom but merely because circumstances that might justify their use have fortunately not arisen.

67. The Court does not intend to pronounce here upon the practice known as the "policy of deterrence". It notes that it is a fact that a number of States adhered to that practice during the greater part of the Cold War and continue to adhere to it. Furthermore, the members of the international community are profoundly divided on the matter of whether non-recourse to nuclear weapons over the past 50 years constitutes the expression of an *opinio juris*. Under these circumstances the Court does not consider itself able to find that there is such an *opinio juris*.

68. According to certain States, the important series of General Assembly resolutions, beginning with resolution 1653 (XVI) of 24 November 1961, that deal with nuclear weapons and that affirm, with consistent regularity, the illegality of nuclear weapons, signify the existence of a rule of international customary law which prohibits recourse to those weapons. According to other States, however, the resolutions in question have no binding character on their own account and are not declaratory of any customary rule of prohibition of nuclear weapons; some of these States have also pointed out that this series of resolutions not only did not meet with the approval of all of the nuclear-weapon States but of many other States as well.

69. States which consider that the use of nuclear weapons is illegal indicated that those resolutions did not claim to create any new rules, but were confined to a confirmation of customary law relating to the prohibition of means or methods of warfare which, by their use, overstepped the bounds of what is permissible in the conduct of hostilities. In their view, the resolutions in question did no more than apply to nuclear weapons the existing rules of international law applicable in armed conflict; they were no more than the "envelope" or *instrumentum* containing certain pre-existing customary rules of international law. For those States it is accordingly of little importance that the *instrumentum* should have occasioned negative votes, which cannot have the effect of obliterating those customary rules which have been confirmed by treaty law.

70. The Court notes that General Assembly resolutions, even if they are not binding, may sometimes have normative value. They can, in certain circumstances, provide evidence important for establishing the exist-

ence of a rule or the emergence of an *opinio juris*. To establish whether this is true of a given General Assembly resolution, it is necessary to look at its content and the conditions of its adoption; it is also necessary to see whether an *opinio juris* exists as to its normative character. Or a series of resolutions may show the gradual evolution of the *opinio juris* required for the establishment of a new rule.

71. Examined in their totality, the General Assembly resolutions put before the Court declare that the use of nuclear weapons would be "a direct violation of the Charter of the United Nations"; and in certain formulations that such use "should be prohibited". The focus of these resolutions has sometimes shifted to diverse related matters; however, several of the resolutions under consideration in the present case have been adopted with substantial numbers of negative votes and abstentions; thus, although those resolutions are a clear sign of deep concern regarding the problem of nuclear weapons, they still fall short of establishing the existence of an *opinio juris* on the illegality of the use of such weapons.

72. The Court further notes that the first of the resolutions of the General Assembly expressly proclaiming the illegality of the use of nuclear weapons, resolution 1653 (XVI) of 24 November 1961 (mentioned in subsequent resolutions), after referring to certain international declarations and binding agreements, from the Declaration of St. Petersburg of 1868 to the Geneva Protocol of 1925, proceeded to qualify the legal nature of nuclear weapons, determine their effects, and apply general rules of customary international law to nuclear weapons in particular. That application by the General Assembly of general rules of customary law to the particular case of nuclear weapons indicates that, in its view, there was no specific rule of customary law which prohibited the use of nuclear weapons; if such a rule had existed, the General Assembly could simply have referred to it and would not have needed to undertake such an exercise of legal qualification.

73. Having said this, the Court points out that the adoption each year by the General Assembly, by a large majority, of resolutions recalling the content of resolution 1653 (XVI), and requesting the member States to conclude a convention prohibiting the use of nuclear weapons in any circumstance, reveals the desire of a very large section of the international community to take, by a specific and express prohibition of the use of nuclear weapons, a significant step forward along the road to complete nuclear disarmament. The emergence, as *lex lata*, of a customary rule specifically prohibiting the use of nuclear weapons as such is hampered by the continuing tensions between the nascent *opinio juris* on the one hand, and the still strong adherence to the practice of deterrence on the other.

* *

74. The Court not having found a conventional rule of general scope, nor a customary rule specifically proscribing the threat or use of nuclear weapons *per se*, it will now deal with the question whether recourse to nuclear weapons must be considered as illegal in the light of the principles and rules of international humanitarian law applicable in armed conflict and of the law of neutrality.

75. A large number of customary rules have been developed by the practice of States and are an integral part of the international law relevant to the question posed. The "laws and customs of war" — as they were traditionally called — were the subject of efforts at codification undertaken in The Hague (including the Conventions of 1899 and 1907), and were based partly upon the St. Petersburg Declaration of 1868 as well as the results of the Brussels Conference of 1874. This "Hague Law" and, more particularly, the Regulations Respecting the Laws and Customs of War on Land, fixed the rights and duties of belligerents in their conduct of operations and limited the choice of methods and means of injuring the enemy in an international armed conflict. One should add to this the "Geneva Law" (the Conventions of 1864, 1906, 1929 and 1949), which protects the victims of war and aims to provide safeguards for disabled armed forces personnel and persons not taking part in the hostilities. These two branches of the law applicable in armed conflict have become so closely interrelated that they are considered to have gradually formed one single complex system, known today as international humanitarian law. The provisions of the Additional Protocols of 1977 give expression and attest to the unity and complexity of that law.

76. Since the turn of the century, the appearance of new means of combat has — without calling into question the longstanding principles and rules of international law — rendered necessary some specific prohibitions of the use of certain weapons, such as explosive projectiles under 400 grammes, dum-dum bullets and asphyxiating gases. Chemical and bacteriological weapons were then prohibited by the 1925 Geneva Protocol. More recently, the use of weapons producing "non-detectable fragments", of other types of "mines, booby traps and other devices", and of "incendiary weapons", was either prohibited or limited, depending on the case, by the Convention of 10 October 1980 on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects. The provisions of the Convention on "mines, booby traps and other devices" have just been amended, on 3 May 1996, and now regulate in greater detail, for example, the use of anti-personnel land mines.

77. All this shows that the conduct of military operations is governed by a body of legal prescriptions. This is so because "the right of belligerents to adopt means of injuring the enemy is not unlimited" as stated in Article 22 of the 1907 Hague Regulations relating to the laws and customs of war on land. The St. Petersburg Declaration had already condemned the use of weapons "which uselessly aggravate the suffering of

disabled men or make their death inevitable". The aforementioned Regulations relating to the laws and customs of war on land, annexed to the Hague Convention IV of 1907, prohibit the use of "arms, projectiles, or material calculated to cause unnecessary suffering" (Art. 23).

78. The cardinal principles contained in the texts constituting the fabric of humanitarian law are the following. The first is aimed at the protection of the civilian population and civilian objects and establishes the distinction between combatants and non-combatants; States must never make civilians the object of attack and must consequently never use weapons that are incapable of distinguishing between civilian and military targets. According to the second principle, it is prohibited to cause unnecessary suffering to combatants: it is accordingly prohibited to use weapons causing them such harm or uselessly aggravating their suffering. In application of that second principle, States do not have unlimited freedom of choice of means in the weapons they use.

The Court would likewise refer, in relation to these principles, to the Martens Clause, which was first included in the Hague Convention II with Respect to the Laws and Customs of War on Land of 1899 and which has proved to be an effective means of addressing the rapid evolution of military technology. A modern version of that clause is to be found in Article 1, paragraph 2, of Additional Protocol I of 1977, which reads as follows:

> "In cases not covered by this Protocol or by other international agreements, civilians and combatants remain under the protection and authority of the principles of international law derived from established custom, from the principles of humanity and from the dictates of public conscience."

In conformity with the aforementioned principles, humanitarian law, at a very early stage, prohibited certain types of weapons either because of their indiscriminate effect on combatants and civilians or because of the unnecessary suffering caused to combatants, that is to say, a harm greater than that unavoidable to achieve legitimate military objectives. If an envisaged use of weapons would not meet the requirements of humanitarian law, a threat to engage in such use would also be contrary to that law.

79. It is undoubtedly because a great many rules of humanitarian law applicable in armed conflict are so fundamental to the respect of the human person and "elementary considerations of humanity" as the Court put it in its Judgment of 9 April 1949 in the *Corfu Channel* case (*I.C.J. Reports 1949*, p. 22), that the Hague and Geneva Conventions have enjoyed a broad accession. Further these fundamental rules are to be observed by all States whether or not they have ratified the conventions that contain them, because they constitute intransgressible principles of international customary law.

80. The Nuremberg International Military Tribunal had already found in 1945 that the humanitarian rules included in the Regulations annexed to the Hague Convention IV of 1907 "were recognized by all civilized nations and were regarded as being declaratory of the laws and customs of war" (*Trial of the Major War Criminals, 14 November 1945-1 October 1946,* Nuremberg, 1947, Vol. 1, p. 254).

81. The Report of the Secretary-General pursuant to paragraph 2 of Security Council resolution 808 (1993), with which he introduced the Statute of the International Tribunal for the Prosecution of Persons Responsible for Serious Violations of International Humanitarian Law Committed in the Territory of the Former Yugoslavia since 1991, and which was unanimously approved by the Security Council (resolution 827 (1993)), stated:

> "In the view of the Secretary-General, the application of the principle *nullum crimen sine lege* requires that the international tribunal should apply rules of international humanitarian law which are beyond any doubt part of customary law . . .
> The part of conventional international humanitarian law which has beyond doubt become part of international customary law is the law applicable in armed conflict as embodied in: the Geneva Conventions of 12 August 1949 for the Protection of War Victims; the Hague Convention (IV) Respecting the Laws and Customs of War on Land and the Regulations annexed thereto of 18 October 1907; the Convention on the Prevention and Punishment of the Crime of Genocide of 9 December 1948; and the Charter of the International Military Tribunal of 8 August 1945."

82. The extensive codification of humanitarian law and the extent of the accession to the resultant treaties, as well as the fact that the denunciation clauses that existed in the codification instruments have never been used, have provided the international community with a corpus of treaty rules the great majority of which had already become customary and which reflected the most universally recognized humanitarian principles. These rules indicate the normal conduct and behaviour expected of States.

83. It has been maintained in these proceedings that these principles and rules of humanitarian law are part of *jus cogens* as defined in Article 53 of the Vienna Convention on the Law of Treaties of 23 May 1969. The question whether a norm is part of the *jus cogens* relates to the legal character of the norm. The request addressed to the Court by the General Assembly raises the question of the applicability of the principles and rules of humanitarian law in cases of recourse to nuclear weapons and the consequences of that applicability for the legality of recourse to these weapons. But it does not raise the question of the character of the humanitarian law which would apply to the use of nuclear weapons. There is, therefore, no need for the Court to pronounce on this matter.

84. Nor is there any need for the Court to elaborate on the question of the applicability of Additional Protocol I of 1977 to nuclear weapons. It need only observe that while, at the Diplomatic Conference of 1974-1977, there was no substantive debate on the nuclear issue and no specific solution concerning this question was put forward, Additional Protocol I in no way replaced the general customary rules applicable to all means and methods of combat including nuclear weapons. In particular, the Court recalls that all States are bound by those rules in Additional Protocol I which, when adopted, were merely the expression of the pre-existing customary law, such as the Martens Clause, reaffirmed in the first article of Additional Protocol I. The fact that certain types of weapons were not specifically dealt with by the 1974-1977 Conference does not permit the drawing of any legal conclusions relating to the substantive issues which the use of such weapons would raise.

85. Turning now to the applicability of the principles and rules of humanitarian law to a possible threat or use of nuclear weapons, the Court notes that doubts in this respect have sometimes been voiced on the ground that these principles and rules had evolved prior to the invention of nuclear weapons and that the Conferences of Geneva of 1949 and 1974-1977 which respectively adopted the four Geneva Conventions of 1949 and the two Additional Protocols thereto did not deal with nuclear weapons specifically. Such views, however, are only held by a small minority. In the view of the vast majority of States as well as writers there can be no doubt as to the applicability of humanitarian law to nuclear weapons.

86. The Court shares that view. Indeed, nuclear weapons were invented after most of the principles and rules of humanitarian law applicable in armed conflict had already come into existence; the Conferences of 1949 and 1974-1977 left these weapons aside, and there is a qualitative as well as quantitative difference between nuclear weapons and all conventional arms. However, it cannot be concluded from this that the established principles and rules of humanitarian law applicable in armed conflict did not apply to nuclear weapons. Such a conclusion would be incompatible with the intrinsically humanitarian character of the legal principles in question which permeates the entire law of armed conflict and applies to all forms of warfare and to all kinds of weapons, those of the past, those of the present and those of the future. In this respect it seems significant that the thesis that the rules of humanitarian law do not apply to the new weaponry, because of the newness of the latter, has not been advocated in the present proceedings. On the contrary, the newness of nuclear weapons has been expressly rejected as an argument against the application to them of international humanitarian law:

> "In general, international humanitarian law bears on the threat or use of nuclear weapons as it does of other weapons.

International humanitarian law has evolved to meet contemporary circumstances, and is not limited in its application to weaponry of an earlier time. The fundamental principles of this law endure: to mitigate and circumscribe the cruelty of war for humanitarian reasons." (New Zealand, Written Statement, p. 15, paras. 63-64.)

None of the statements made before the Court in any way advocated a freedom to use nuclear weapons without regard to humanitarian constraints. Quite the reverse; it has been explicitly stated,

> "Restrictions set by the rules applicable to armed conflicts in respect of means and methods of warfare definitely also extend to nuclear weapons" (Russian Federation, CR 95/29, p. 52);

> "So far as the customary law of war is concerned, the United Kingdom has always accepted that the use of nuclear weapons is subject to the general principles of the *jus in bello*" (United Kingdom, CR 95/34, p. 45);

and

> "The United States has long shared the view that the law of armed conflict governs the use of nuclear weapons — just as it governs the use of conventional weapons" (United States of America, CR 95/34, p. 85).

87. Finally, the Court points to the Martens Clause, whose continuing existence and applicability is not to be doubted, as an affirmation that the principles and rules of humanitarian law apply to nuclear weapons.

*

88. The Court will now turn to the principle of neutrality which was raised by several States. In the context of the advisory proceedings brought before the Court by the WHO concerning the *Legality of the Use by a State of Nuclear Weapons in Armed Conflict*, the position was put as follows by one State:

> "The principle of neutrality, in its classic sense, was aimed at preventing the incursion of belligerent forces into neutral territory, or attacks on the persons or ships of neutrals. Thus: 'the territory of neutral powers is inviolable' (Article 1 of the Hague Convention (V) Respecting the Rights and Duties of Neutral Powers and Persons in Case of War on Land, concluded on 18 October 1907); 'belligerents are bound to respect the sovereign rights of neutral powers . . .' (Article 1 to the Hague Convention (XIII) Respecting the Rights and Duties of Neutral Powers in Naval War, concluded on 18 October 1907), 'neutral states have equal interest in having their rights respected by belligerents . . .' (Preamble to Convention on Maritime

> Neutrality, concluded on 20 February 1928). It is clear, however, that the principle of neutrality applies with equal force to transborder incursions of armed forces and to the transborder damage caused to a neutral State by the use of a weapon in a belligerent State." (Nauru, Written Statement (I), p. 35, IV E.)

The principle so circumscribed is presented as an established part of the customary international law.

89. The Court finds that as in the case of the principles of humanitarian law applicable in armed conflict, international law leaves no doubt that the principle of neutrality, whatever its content, which is of a fundamental character similar to that of the humanitarian principles and rules, is applicable (subject to the relevant provisions of the United Nations Charter), to all international armed conflict, whatever type of weapons might be used.

*

90. Although the applicability of the principles and rules of humanitarian law and of the principle of neutrality to nuclear weapons is hardly disputed, the conclusions to be drawn from this applicability are, on the other hand, controversial.

91. According to one point of view, the fact that recourse to nuclear weapons is subject to and regulated by the law of armed conflict does not necessarily mean that such recourse is as such prohibited. As one State put it to the Court:

> "Assuming that a State's use of nuclear weapons meets the requirements of self-defence, it must then be considered whether it conforms to the fundamental principles of the law of armed conflict regulating the conduct of hostilities" (United Kingdom, Written Statement, p. 40, para. 3.44);
>
> "the legality of the use of nuclear weapons must therefore be assessed in the light of the applicable principles of international law regarding the use of force and the conduct of hostilities, as is the case with other methods and means of warfare" (*ibid.*, p. 75, para. 4.2 (3));

and

> "The reality . . . is that nuclear weapons might be used in a wide variety of circumstances with very different results in terms of likely civilian casualties. In some cases, such as the use of a low yield nuclear weapon against warships on the High Seas or troops in sparsely populated areas, it is possible to envisage a nuclear attack which caused comparatively few civilian casualties. It is by no means the case that every use of nuclear weapons against a military objective would inevitably cause very great collateral civilian casualties."

(*Ibid.*, p. 53, para. 3.70; see also United States of America, CR 95/34, pp. 89-90.)

92. Another view holds that recourse to nuclear weapons could never be compatible with the principles and rules of humanitarian law and is therefore prohibited. In the event of their use, nuclear weapons would in all circumstances be unable to draw any distinction between the civilian population and combatants, or between civilian objects and military objectives, and their effects, largely uncontrollable, could not be restricted, either in time or in space, to lawful military targets. Such weapons would kill and destroy in a necessarily indiscriminate manner, on account of the blast, heat and radiation occasioned by the nuclear explosion and the effects induced; and the number of casualties which would ensue would be enormous. The use of nuclear weapons would therefore be prohibited in any circumstance, notwithstanding the absence of any explicit conventional prohibition. That view lay at the basis of the assertions by certain States before the Court that nuclear weapons are by their nature illegal under customary international law, by virtue of the fundamental principle of humanity.

93. A similar view has been expressed with respect to the effects of the principle of neutrality. Like the principles and rules of humanitarian law, that principle has therefore been considered by some to rule out the use of a weapon the effects of which simply cannot be contained within the territories of the contending States.

94. The Court would observe that none of the States advocating the legality of the use of nuclear weapons under certain circumstances, including the "clean" use of smaller, low yield, tactical nuclear weapons, has indicated what, supposing such limited use were feasible, would be the precise circumstances justifying such use; nor whether such limited use would not tend to escalate into the all-out use of high yield nuclear weapons. This being so, the Court does not consider that it has a sufficient basis for a determination on the validity of this view.

95. Nor can the Court make a determination on the validity of the view that the recourse to nuclear weapons would be illegal in any circumstance owing to their inherent and total incompatibility with the law applicable in armed conflict. Certainly, as the Court has already indicated, the principles and rules of law applicable in armed conflict — at the heart of which is the overriding consideration of humanity — make the conduct of armed hostilities subject to a number of strict requirements. Thus, methods and means of warfare, which would preclude any distinction between civilian and military targets, or which would result in unnecessary suffering to combatants, are prohibited. In view of the unique characteristics of nuclear weapons, to which the Court has referred above, the use of such weapons in fact seems scarcely reconcilable with respect for such requirements. Nevertheless, the Court considers that it

does not have sufficient elements to enable it to conclude with certainty that the use of nuclear weapons would necessarily be at variance with the principles and rules of law applicable in armed conflict in any circumstance.

96. Furthermore, the Court cannot lose sight of the fundamental right of every State to survival, and thus its right to resort to self-defence, in accordance with Article 51 of the Charter, when its survival is at stake.

Nor can it ignore the practice referred to as "policy of deterrence", to which an appreciable section of the international community adhered for many years. The Court also notes the reservations which certain nuclear-weapon States have appended to the undertakings they have given, notably under the Protocols to the Treaties of Tlatelolco and Rarotonga, and also under the declarations made by them in connection with the extension of the Treaty on the Non-Proliferation of Nuclear Weapons, not to resort to such weapons.

97. Accordingly, in view of the present state of international law viewed as a whole, as examined above by the Court, and of the elements of fact at its disposal, the Court is led to observe that it cannot reach a definitive conclusion as to the legality or illegality of the use of nuclear weapons by a State in an extreme circumstance of self-defence, in which its very survival would be at stake.

* * *

98. Given the eminently difficult issues that arise in applying the law on the use of force and above all the law applicable in armed conflict to nuclear weapons, the Court considers that it now needs to examine one further aspect of the question before it, seen in a broader context.

In the long run, international law, and with it the stability of the international order which it is intended to govern, are bound to suffer from the continuing difference of views with regard to the legal status of weapons as deadly as nuclear weapons. It is consequently important to put an end to this state of affairs: the long-promised complete nuclear disarmament appears to be the most appropriate means of achieving that result.

99. In these circumstances, the Court appreciates the full importance of the recognition by Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons of an obligation to negotiate in good faith a nuclear disarmament. This provision is worded as follows:

> "Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control."

The legal import of that obligation goes beyond that of a mere obligation of conduct; the obligation involved here is an obligation to achieve a precise result — nuclear disarmament in all its aspects — by adopting a particular course of conduct, namely, the pursuit of negotiations on the matter in good faith.

100. This twofold obligation to pursue and to conclude negotiations formally concerns the 182 States parties to the Treaty on the Non-Proliferation of Nuclear Weapons, or, in other words, the vast majority of the international community.

Virtually the whole of this community appears moreover to have been involved when resolutions of the United Nations General Assembly concerning nuclear disarmament have repeatedly been unanimously adopted. Indeed, any realistic search for general and complete disarmament, especially nuclear disarmament, necessitates the co-operation of all States.

101. Even the very first General Assembly resolution, unanimously adopted on 24 January 1946 at the London session, set up a commission whose terms of reference included making specific proposals for, among other things, "the elimination from national armaments of atomic weapons and of all other major weapons adaptable to mass destruction". In a large number of subsequent resolutions, the General Assembly has reaffirmed the need for nuclear disarmament. Thus, in resolution 808 A (IX) of 4 November 1954, which was likewise unanimously adopted, it concluded

> "that a further effort should be made to reach agreement on comprehensive and co-ordinated proposals to be embodied in a draft international disarmament convention providing for: . . . *(b)* The total prohibition of the use and manufacture of nuclear weapons and weapons of mass destruction of every type, together with the conversion of existing stocks of nuclear weapons for peaceful purposes."

The same conviction has been expressed outside the United Nations context in various instruments.

102. The obligation expressed in Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons includes its fulfilment in accordance with the basic principle of good faith. This basic principle is set forth in Article 2, paragraph 2, of the Charter. It was reflected in the Declaration on Friendly Relations between States (resolution 2625 (XXV) of 24 October 1970) and in the Final Act of the Helsinki Conference of 1 August 1975. It is also embodied in Article 26 of the Vienna Convention on the Law of Treaties of 23 May 1969, according to which "[e]very treaty in force is binding upon the parties to it and must be performed by them in good faith".

Nor has the Court omitted to draw attention to it, as follows:

> "One of the basic principles governing the creation and perform-

ance of legal obligations, whatever their source, is the principle of good faith. Trust and confidence are inherent in international co-operation, in particular in an age when this co-operation in many fields is becoming increasingly essential." (*Nuclear Tests (Australia* v. *France), Judgment, I.C.J. Reports 1974*, p. 268, para. 46.)

103. In its resolution 984 (1995) dated 11 April 1995, the Security Council took care to reaffirm "the need for all States Parties to the Treaty on the Non-Proliferation of Nuclear Weapons to comply fully with all their obligations" and urged

> "all States, as provided for in Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons, to pursue negotiations in good faith on effective measures relating to nuclear disarmament and on a treaty on general and complete disarmament under strict and effective international control which remains a universal goal".

The importance of fulfilling the obligation expressed in Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons was also reaffirmed in the final document of the Review and Extension Conference of the parties to the Treaty on the Non-Proliferation of Nuclear Weapons, held from 17 April to 12 May 1995.

In the view of the Court, it remains without any doubt an objective of vital importance to the whole of the international community today.

* * *

104. At the end of the present Opinion, the Court emphasizes that its reply to the question put to it by the General Assembly rests on the totality of the legal grounds set forth by the Court above (paragraphs 20 to 103), each of which is to be read in the light of the others. Some of these grounds are not such as to form the object of formal conclusions in the final paragraph of the Opinion; they nevertheless retain, in the view of the Court, all their importance.

* * *

105. For these reasons,

THE COURT,

(1) By thirteen votes to one,

Decides to comply with the request for an advisory opinion;

IN FAVOUR: *President* Bedjaoui; *Vice-President* Schwebel; *Judges* Guillaume, Shahabuddeen, Weeramantry, Ranjeva, Herczegh, Shi, Fleischhauer, Koroma, Vereshchetin, Ferrari Bravo, Higgins;

AGAINST: *Judge* Oda;

(2) *Replies* in the following manner to the question put by the General Assembly:

A. Unanimously,

There is in neither customary nor conventional international law any specific authorization of the threat or use of nuclear weapons;

B. By eleven votes to three,

There is in neither customary nor conventional international law any comprehensive and universal prohibition of the threat or use of nuclear weapons as such;

IN FAVOUR: *President* Bedjaoui; *Vice-President* Schwebel; *Judges* Oda, Guillaume, Ranjeva, Herczegh, Shi, Fleischhauer, Vereshchetin, Ferrari Bravo, Higgins;

AGAINST: *Judges* Shahabuddeen, Weeramantry, Koroma;

C. Unanimously,

A threat or use of force by means of nuclear weapons that is contrary to Article 2, paragraph 4, of the United Nations Charter and that fails to meet all the requirements of Article 51, is unlawful;

D. Unanimously,

A threat or use of nuclear weapons should also be compatible with the requirements of the international law applicable in armed conflict, particularly those of the principles and rules of international humanitarian law, as well as with specific obligations under treaties and other undertakings which expressly deal with nuclear weapons;

E. By seven votes to seven, by the President's casting vote,

It follows from the above-mentioned requirements that the threat or use of nuclear weapons would generally be contrary to the rules of international law applicable in armed conflict, and in particular the principles and rules of humanitarian law;

However, in view of the current state of international law, and of the elements of fact at its disposal, the Court cannot conclude definitively whether the threat or use of nuclear weapons would be lawful or unlawful in an extreme circumstance of self-defence, in which the very survival of a State would be at stake;

IN FAVOUR: *President* Bedjaoui; *Judges* Ranjeva, Herczegh, Shi, Fleischhauer, Vereshchetin, Ferrari Bravo;

AGAINST: *Vice-President* Schwebel; *Judges* Oda, Guillaume, Shahabuddeen, Weeramantry, Koroma, Higgins;

F. Unanimously,

> There exists an obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control.

Done in English and in French, the English text being authoritative, at the Peace Palace, The Hague, this eighth day of July, one thousand nine hundred and ninety-six, in two copies, one of which will be placed in the archives of the Court and the other transmitted to the Secretary-General of the United Nations.

(Signed) Mohammed BEDJAOUI,
President.

(Signed) Eduardo VALENCIA-OSPINA,
Registrar.

President BEDJAOUI, Judges HERCZEGH, SHI, VERESHCHETIN and FERRARI BRAVO append declarations to the Advisory Opinion of the Court.

Judges GUILLAUME, RANJEVA AND FLEISCHHAUER append separate opinions to the Advisory Opinion of the Court.

Vice-President SCHWEBEL, Judges ODA, SHAHABUDDEEN, WEERAMANTRY, KOROMA and HIGGINS append dissenting opinions to the Advisory Opinion of the Court.

(Initialled) M.B.

(Initialled) E.V.O.

Annex 4

COUR INTERNATIONALE DE JUSTICE

RECUEIL DES ARRÊTS,
AVIS CONSULTATIFS ET ORDONNANCES

INTERPRÉTATION DES TRAITÉS DE PAIX CONCLUS AVEC LA BULGARIE, LA HONGRIE ET LA ROUMANIE

AVIS CONSULTATIF DU 30 MARS 1950

1950

INTERNATIONAL COURT OF JUSTICE

REPORTS OF JUDGMENTS,
ADVISORY OPINIONS AND ORDERS

INTERPRETATION OF PEACE TREATIES WITH BULGARIA, HUNGARY AND ROMANIA

ADVISORY OPINION OF MARCH 30th, 1950

Le présent avis doit être cité comme suit :

« *Interprétation des traités de paix,*
Avis consultatif : C. I. J. Recueil 1950, p. 65. »

This Opinion should be cited as follows:

"*Interpretation of Peace Treaties,*
Advisory Opinion : I.C.J. Reports 1950, p. 65."

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INTERNATIONAL COURT OF JUSTICE

YEAR 1950

March 30th, 1950

1950
March 30th
General List
No. 8

INTERPRETATION OF PEACE TREATIES WITH BULGARIA, HUNGARY AND ROMANIA

Advisory function.—Competence of the Court: objection on the ground of alleged lack of competence of the General Assembly, based on the character of the Court as an organ of the United Nations; Article 2, paragraph 7, of the Charter.—Power of the Court to reply to a Request for Opinion in spite of the opposition of certain States; duty to answer; limits of this duty; Article 65 of the Statute.—Questions relating solely to the conditions of application of a procedure, provided for by treaty, for the settlement of disputes.—Article 68 of the Statute: discretion allowed to the Court.—Existence of disputes; applicability of the procedure provided for by treaty for the settlement of disputes to disputes concerning the interpretation or execution of the treaty.—Definition of a question put to the Court.—Compulsory settlement of disputes by Treaty Commissions; obligation for the parties to the dispute to co-operate in the constitution of the Commissions by appointing their representatives.

ADVISORY OPINION

Present: *President* BASDEVANT; *Vice-President* GUERRERO; *Judges* ALVAREZ, HACKWORTH, WINIARSKI, ZORIČIĆ, DE VISSCHER, Sir ARNOLD MCNAIR, KLAESTAD, BADAWI PASHA, KRYLOV, READ, HSU MO, AZEVEDO; *Registrar* HAMBRO.

THE COURT,

composed as above,

gives the following Advisory Opinion :

On October 22nd, 1949, the General Assembly of the United Nations adopted the following Resolution :

"*Whereas* the United Nations, pursuant to Article 55 of the Charter, shall promote universal respect for, and observance of, human rights and fundamental freedoms for all without distinction as to race, sex, language or religion,

Whereas the General Assembly, at the second part of its Third Regular Session, considered the question of the observance in Bulgaria and Hungary of human rights and fundamental freedoms,

Whereas the General Assembly, on 30 April 1949, adopted Resolution 272 (III) concerning this question in which it expressed its deep concern at the grave accusations made against the Governments of Bulgaria and Hungary regarding the suppression of human rights and fundamental freedoms in those countries; noted with satisfaction that steps had been taken by several States signatories to the Treaties of Peace with Bulgaria and Hungary regarding these accusations; expressed the hope that measures would be diligently applied, in accordance with the Treaties, in order to ensure respect for human rights and fundamental freedoms; and most urgently drew the attention of the Governments of Bulgaria and Hungary to their obligations under the Peace Treaties, including the obligation to co-operate in the settlement of the question,

Whereas the General Assembly has resolved to consider also at the Fourth Regular Session the question of the observance in Romania of human rights and fundamental freedoms,

Whereas certain of the Allied and Associated Powers signatories to the Treaties of Peace with Bulgaria, Hungary and Romania have charged the Governments of those countries with violations of the Treaties of Peace and have called upon those Governments to take remedial measures,

Whereas the Governments of Bulgaria, Hungary and Romania have rejected the charges of Treaty violations,

Whereas the Governments of the Allied and Associated Powers concerned have sought unsuccessfully to refer the question of Treaty violations to the Heads of Mission in Sofia, Budapest and Bucharest, in pursuance of certain provisions in the Treaties of Peace,

Whereas the Governments of these Allied and Associated Powers have called upon the Governments of Bulgaria, Hungary and

Romania to join in appointing Commissions pursuant to the provisions of the respective Treaties of Peace for the settlement of disputes concerning the interpretation or execution of these Treaties,

Whereas the Governments of Bulgaria, Hungary and Romania have refused to appoint their representatives to the Treaty Commissions, maintaining that they were under no legal obligation to do so,

Whereas the Secretary-General of the United Nations is authorized by the Treaties of Peace, upon request by either party to a dispute, to appoint the third member of a Treaty Commission if the parties fail to agree upon the appointment of the third member,

Whereas it is important for the Secretary-General to be advised authoritatively concerning the scope of his authority under the Treaties of Peace,

The General Assembly

1. *Expresses* its continuing interest in and its increased concern at the grave accusations made against Bulgaria, Hungary and Romania ;

2. *Records* its opinion that the refusal of the Governments of Bulgaria, Hungary and Romania to co-operate in its efforts to examine the grave charges with regard to the observance of human rights and fundamental freedoms justifies this concern of the General Assembly about the state of affairs prevailing in Bulgaria, Hungary and Romania in this respect ;

3. *Decides* to submit the following questions to the International Court of Justice for an advisory opinion :

'I. Do the diplomatic exchanges between Bulgaria, Hungary and Romania, on the one hand, and certain Allied and Associated Powers signatories to the Treaties of Peace, on the other, concerning the implementation of Article 2 of the Treaties with Bulgaria and Hungary and Article 3 of the Treaty with Romania, disclose disputes subject to the provisions for the settlement of disputes contained in Article 36 of the Treaty of Peace with Bulgaria, Article 40 of the Treaty of Peace with Hungary, and Article 38 of the Treaty of Peace with Romania ?'

In the event of an affirmative reply to question I :

'II. Are the Governments of Bulgaria, Hungary and Romania obligated to carry out the provisions of the articles referred to in question I, including the provisions for the appointment of their representatives to the Treaty Commissions ?'

In the event of an affirmative reply to question II and if within thirty days from the date when the Court delivers its opinion,

the Governments concerned have not notified the Secretary-General that they have appointed their representatives to the Treaty Commissions, and the Secretary-General has so advised the International Court of Justice :

'III. If one party fails to appoint a representative to a Treaty Commission under the Treaties of Peace with Bulgaria, Hungary and Romania where that party is obligated to appoint a representative to the Treaty Commission, is the Secretary-General of the United Nations authorized to appoint the third member of the Commission upon the request of the other party to a dispute according to the provisions of the respective Treaties ?'

In the event of an affirmative reply to question III :

'IV. Would a Treaty Commission composed of a representative of one party and a third member appointed by the Secretary-General of the United Nations constitute a Commission, within the meaning of the relevant Treaty articles, competent to make a definitive and binding decision in settlement of a dispute ?'

4. *Requests* the Secretary-General to make available to the International Court of Justice the relevant exchanges of diplomatic correspondence communicated to the Secretary-General for circulation to the Members of the United Nations and the records of the General Assembly proceedings on this question ;

5. *Decides* to retain on the agenda of the Fifth Regular Session of the General Assembly the question of the observance of human rights and fundamental freedoms in Bulgaria, Hungary and Romania, with a view to ensuring that the charges are appropriately examined and dealt with."

By a letter of October 31st, 1949, filed in the Registry on November 3rd, the Secretary-General of the United Nations transmitted to the Court a certified true copy of the General Assembly's Resolution.

On November 7th, 1949, in accordance with paragraph 1 of Article 66 of the Court's Statute, the Registrar gave notice of the Request to all States entitled to appear before the Court. On the same date, the Registrar, by means of a special and direct communication as provided in paragraph 2 of the above-mentioned article, informed all States entitled to appear before the Court and parties to one or more of the above-mentioned Peace Treaties (Australia, Canada, United States of America, Greece, India, New Zealand, Pakistan, United Kingdom of Great Britain and Northern Ireland, Byelorussian Soviet Socialist Republic, Ukrainian Soviet Socialist Republic, Czechoslovakia, Union of Soviet Socialist Republics, Union of South Africa, Yugoslavia) that the Court was prepared to receive from them written statements on the questions submitted

to it for an advisory opinion and to hear oral statements at a date which would be fixed in due course.

An identical communication was sent, also on November 7th, in pursuance of paragraph 1 of Article 63 of the Statute, to the other States parties to one of the above-mentioned Treaties, namely, Bulgaria, Hungary and Romania.

These communications were accompanied by copies of an Order, made on the same date, by which the Acting President of the Court appointed January 16th, 1950, as the date of expiry of the time-limit for the submission of written statements and reserved the rest of the procedure for further decision.

Written statements and communications were received within the prescribed time-limit from the following States : United States of America, United Kingdom, Bulgaria, Ukrainian Soviet Socialist Republic, Union of Soviet Socialist Republics, Byelorussian Soviet Socialist Republic, Romania, Czechoslovakia, Australia and Hungary.

In accordance with Article 65 of the Statute, the Secretary-General of the United Nations transmitted to the Registrar a set of documents which reached the Registry on November 26th, 1949. Some additional documents, which had subsequently been filed with the Secretariat, were forwarded to the Registry, where they arrived on February 24th, 1950. All these documents are enumerated in the list attached to the present Opinion.

In a letter dated January 23rd, 1950, the Assistant Secretary-General in charge of the Legal Department of the Secretariat of the United Nations announced that he intended to take part in the oral proceedings and to submit a statement on behalf of the Secretary-General.

The Government of the United Kingdom and the Government of the United States of America stated, in letters dated respectively January 6th and February 10th, 1950, that they intended to submit oral statements.

At public sittings held on February 28th and on March 1st and 2nd, 1950, the Court heard oral statements submitted :

on behalf of the Secretary-General of the United Nations by Mr. Ivan Kerno, Assistant Secretary-General in charge of the Legal Department ;

on behalf of the Government of the United States of America by the Honorable Benjamin V. Cohen ;

on behalf of the Government of the United Kingdom by Mr. G. G. Fitzmaurice, C.M.G., Second Legal Adviser of the Foreign Office.

* * *

In conformity with the Resolution of the General Assembly of October 22nd, 1949, the Court is at present called upon to give an Opinion only on Questions I and II set forth in that Resolution.

The power of the Court to exercise its advisory function in the present case has been contested by the Governments of Bulgaria, Hungary and Romania, and also by several other Governments, in the communications which they have addressed to the Court.

This objection is founded mainly on two arguments.

It is contended that the Request for an Opinion was an action *ultra vires* on the part of the General Assembly because, in dealing with the question of the observance of human rights and fundamental freedoms in the three States mentioned above, it was "interfering" or "intervening" in matters essentially within the domestic jurisdiction of States. This contention against the exercise by the Court of its advisory function seems thus to be based on the alleged incompetence of the General Assembly itself, an incompetence deduced from Article 2, paragraph 7, of the Charter.

The terms of the General Assembly's Resolution of October 22nd, 1949, considered as a whole and in its separate parts, show that this argument is based on a misunderstanding. When the vote was taken on this Resolution, the General Assembly was faced with a situation arising out of the charges made by certain Allied and Associated Powers, against the Governments of Bulgaria, Hungary and Romania of having violated the provisions of the Peace Treaties concerning the observance of human rights and fundamental freedoms. For the purposes of the present Opinion, it suffices to note that the General Assembly justified the adoption of its Resolution by stating that "the United Nations, pursuant to Article 55 of the Charter, shall promote universal respect for and observance of human rights and fundamental freedoms for all without distinction as to race, sex, language or religion".

The Court is not called upon to deal with the charges brought before the General Assembly since the Questions put to the Court relate neither to the alleged violations of the provisions of the Treaties concerning human rights and fundamental freedoms nor to the interpretation of the articles relating to these matters. The object of the Request is much more limited. It is directed solely to obtaining from the Court certain clarifications of a legal nature regarding the applicability of the procedure for the settlement of disputes by the Commissions provided for in the express terms of Article 36 of the Treaty with Bulgaria, Article 40 of the Treaty with Hungary and Article 38 of the Treaty with Romania. The interpretation of the terms of a treaty for this purpose could not be considered as a question essentially within the domestic jurisdiction of a State. It is a question of inter-

national law which, by its very nature, lies within the competence of the Court.

These considerations also suffice to dispose of the objection based on the principle of domestic jurisdiction and directed specifically against the competence of the Court, namely, that the Court, as an organ of the United Nations, is bound to observe the provisions of the Charter, including Article 2, paragraph 7.

The same considerations furnish an answer to the objection that the advisory procedure before the Court would take the place of the procedure instituted by the Peace Treaties for the settlement of disputes. So far from placing an obstacle in the way of the latter procedure, the object of this Request is to facilitate it by seeking information for the General Assembly as to its applicability to the circumstances of the present case.

It thus appears that these objections to the Court's competence to give the Advisory Opinion which has been requested are ill-founded and cannot be upheld.

Another argument that has been invoked against the power of the Court to answer the Questions put to it in this case is based on the opposition of the Governments of Bulgaria, Hungary and Romania to the advisory procedure. The Court cannot, it is said, give the Advisory Opinion requested without violating the well-established principle of international law according to which no judicial proceedings relating to a legal question pending between States can take place without their consent.

This objection reveals a confusion between the principles governing contentious procedure and those which are applicable to Advisory Opinions.

The consent of States, parties to a dispute, is the basis of the Court's jurisdiction in contentious cases. The situation is different in regard to advisory proceedings even where the Request for an Opinion relates to a legal question actually pending between States. The Court's reply is only of an advisory character: as such, it has no binding force. It follows that no State, whether a Member of the United Nations or not, can prevent the giving of an Advisory Opinion which the United Nations considers to be desirable in order to obtain enlightenment as to the course of action it should take. The Court's Opinion is given not to the States, but to the organ which is entitled to request it; the reply of the Court, itself an "organ of the United Nations", represents its participation in the activities of the Organization, and, in principle, should not be refused.

There are certain limits, however, to the Court's duty to reply to a Request for an Opinion. It is not merely an "organ of the United Nations", it is essentially the "principal judicial organ" of the Organization (Art. 92 of the Charter and Art. 1 of the Statute). It is on account of this character of the Court that its

power to answer the present Request for an Opinion has been challenged.

Article 65 of the Statute is permissive. It gives the Court the power to examine whether the circumstances of the case are of such a character as should lead it to decline to answer the Request. In the opinion of the Court, the circumstances of the present case are profoundly different from those which were before the Permanent Court of International Justice in the Eastern Carelia case (Advisory Opinion No. 5), when that Court declined to give an Opinion because it found that the question put to it was directly related to the main point of a dispute actually pending between two States, so that answering the question would be substantially equivalent to deciding the dispute between the parties, and that at the same time it raised a question of fact which could not be elucidated without hearing both parties.

As has been observed, the present Request for an Opinion is solely concerned with the applicability to certain disputes of the procedure for settlement instituted by the Peace Treaties, and it is justifiable to conclude that it in no way touches the merits of those disputes. Furthermore, the settlement of these disputes is entrusted solely to the Commissions provided for by the Peace Treaties. Consequently, it is for these Commissions to decide upon any objections which may be raised to their jurisdiction in respect of any of these disputes, and the present Opinion in no way prejudges the decisions that may be taken on those objections. It follows that the legal position of the parties to these disputes cannot be in any way compromised by the answers that the Court may give to the Questions put to it.

It is true that Article 68 of the Statute provides that the Court in the exercise of its advisory functions shall further be guided by the provisions of the Statute which apply in contentious cases. But according to the same article these provisions would be applicable only "to the extent to which it [the Court] recognizes them to be applicable". It is therefore clear that their application depends on the particular circumstances of each case and that the Court possesses a large amount of discretion in the matter. In the present case the Court is dealing with a Request for an Opinion, the sole object of which is to enlighten the General Assembly as to the opportunities which the procedure contained in the Peace Treaties may afford for putting an end to a situation which has been presented to it. That being the object of the Request, the Court finds in the opposition to it made by Bulgaria, Hungary and Romania no reason why it should abstain from replying to the Request.

For the reasons stated above, the Court considers that it has the power to answer Questions I and II and that it is under a duty to do so.

* * *

Question I is framed in the following terms:

> "Do the diplomatic exchanges between Bulgaria, Hungary and Romania on the one hand and certain Allied and Associated Powers signatories to the Treaties of Peace on the other, concerning the implementation of Article 2 of the Treaties with Bulgaria and Hungary and Article 3 of the Treaty with Romania, disclose disputes subject to the provisions for the settlement of disputes contained in Article 36 of the Treaty of Peace with Bulgaria, Article 40 of the Treaty of Peace with Hungary and Article 38 of the Treaty of Peace with Romania?"

The text of the articles mentioned in Question I is as follows:

Article 2 of the Treaty with Bulgaria (to which correspond *mutatis mutandis* Article 2, papagraph 1, of the Treaty with Hungary and Article 3, paragraph 1, of the Treaty with Romania):

> "Bulgaria shall take all measures necessary to secure to all persons under Bulgarian jurisdiction, without distinction as to race, sex, language or religion, the enjoyment of human rights and of the fundamental freedoms, including freedom of expression, of press and publication, of religious worship, of political opinion and of public meeting."

Article 36 of the Treaty with Bulgaria (to which correspond *mutatis mutandis* Article 40 of the Treaty with Hungary and Article 38 of the Treaty with Romania):

> "1. Except where another procedure is specifically provided under any article of the present Treaty, any dispute concerning the interpretation or execution of the Treaty, which is not settled by direct diplomatic negotiations, shall be referred to the Three Heads of Mission acting under Article 35, except that in this case the Heads of Mission will not be restricted by the time-limit provided in that Article. Any such dispute not resolved by them within a period of two months shall, unless the parties to the dispute mutually agree upon another means of settlement, be referred at the request of either party to the dispute to a Commission composed of one representative of each party and a third member selected by mutual agreement of the two parties from nationals of a third country. Should the two parties fail to agree within a period of one month upon the appointment of the third member, the Secretary-General of the United Nations may be requested by either party to make the appointment.
>
> 2. The decision of the majority of the members of the Commission shall be the decision of the Commission, and shall be accepted by the parties as definitive and binding."

The text of Article 35, which is referred to in Article 36 of the Treaty with Bulgaria (and to which correspond *mutatis mutandis* Article 39 of the Treaty with Hungary and Article 37 of the Treaty with Romania), is as follows:

"1. For a period not to exceed eighteen months from the coming into force of the present Treaty, the Heads of the Diplomatic Missions in Sofia of the Soviet Union, the United Kingdom and the United States of America, acting in concert, will represent the Allied and Associated Powers in dealing with the Bulgarian Government in all matters concerning the execution and interpretation of the present Treaty.

2. The Three Heads of Mission will give the Bulgarian Government such guidance, technical advice and clarification as may be necessary to ensure the rapid and efficient execution of the present Treaty both in letter and in spirit.

3. The Bulgarian Government shall afford the said Three Heads of Mission all necessary information and any assistance which they may require in the fulfilment of the tasks devolving on them under the present Treaty."

Question I involves two main points. First, do the diplomatic exchanges between Bulgaria, Hungary and Romania on the one hand and certain Allied and Associated Powers signatories to the Peace Treaties on the other, disclose any disputes ? Second, if they do, are such disputes among those which are subject to the provisions for the settlement of disputes contained in Article 36 of the Treaty with Bulgaria, Article 40 of the Treaty with Hungary, and Article 38 of the Treaty with Romania ?

Whether there exists an international dispute is a matter for objective determination. The mere denial of the existence of a dispute does not prove its non-existence. In the diplomatic correspondence submitted to the Court, the United Kingdom, acting in association with Australia, Canada and New Zealand, and the United States of America charged Bulgaria, Hungary and Romania with having violated, in various ways, the provisions of the articles dealing with human rights and fundamental freedoms in the Peace Treaties and called upon the three Governments to take remedial measures to carry out their obligations under the Treaties. The three Governments, on the other hand, denied the charges. There has thus arisen a situation in which the two sides hold clearly opposite views concerning the question of the performance or non-performance of certain treaty obligations. Confronted with such a situation, the Court must conclude that international disputes have arisen.

This conclusion is not invalidated by the text of Article 36 of the Treaty with Bulgaria (Article 40 of the Treaty with Hungary and Article 38 of the Treaty with Romania). This article, in referring to "any dispute", is couched in general terms. It does not justify limiting the idea of "the dispute" to a dispute between the United States of America, the United Kingdom and the Union of Soviet Socialist Republics acting in concert on the one hand, and Bulgaria

(Hungary or Romania) on the other. In the present case, a dispute exists between each of the three States—Bulgaria, Hungary and Romania—and each of the Allied and Associated States which sent protests to them.

The next point to be dealt with is whether the disputes are subject to the provisions of the articles for the settlement of disputes contained in the Peace Treaties. The disputes must be considered to fall within those provisions if they relate to the interpretation or execution of the Treaties, and if no other procedure of settlement is specifically provided elsewhere in the Treaties.

Inasmuch as the disputes relate to the question of the performance or non-performance of the obligations provided in the articles dealing with human rights and fundamental freedoms, they are clearly disputes concerning the interpretation or execution of the Peace Treaties. In particular, certain answers from the Governments accused of violations of the Peace Treaties make use of arguments which clearly involve an interpretation of those Treaties.

Since no other procedure is specifically provided in any other article of the Treaties, the disputes must be subject to the methods of settlement contained in the articles providing for the settlement of all disputes.

The Court thus concludes that Question I must be answered in the affirmative.

In these circumstances, it becomes necessary to take up Question II, which is as follows :

> "Are the Governments of Bulgaria, Hungary and Romania obligated to carry out the provisions of the articles referred to in Question I, including the provisions for the appointment of their representatives to the Treaty Commissions ?"

Before answering the Question, the Court must determine the scope of the expression "the provisions of the articles referred to in Question I". Question I mentions two sets of articles : one set being those articles concerning human rights, namely, Article 2 of the Treaties with Bulgaria and Hungary, and Article 3 of the Treaty with Romania ; the other set being those articles concerning the settlement of disputes, namely, Article 36 of the Treaty with Bulgaria, Article 40 of the Treaty with Hungary and Article 38 of the Treaty with Romania. The Court considers that the expression "the provisions of the articles referred to in Question I" refers only to the articles providing for the settlement of disputes, and does not refer to the articles dealing with human rights.

This view is clearly borne out by the various considerations stated in the Resolution of the General Assembly of October 22nd, 1949. It is confirmed by the fact that the Questions put to the Court have for their sole object to determine whether the disputes, if they exist, are among those falling under the procedure provided for in the Treaties with a view to their settlement by arbitration. The Court does not think that the General Assembly would have asked it whether Bulgaria, Hungary and Romania are obligated to carry out the articles concerning human rights. For, in the first place, the three Governments have not denied that they are obligated to carry out these articles. In the second place, the words which precede Question II, "In the event of an affirmative answer to Question I", exclude the idea that Question II refers to the articles relating to human rights. There is no reason why the General Assembly should have made the consideration of the question concerning human rights depend on an affirmative answer to a question relating to the existence of disputes. The articles concerning human rights are mentioned in Question I only by way of describing the subject-matter of the diplomatic exchanges between the States concerned.

The real meaning of Question II, in the opinion of the Court, is this : In view of the disputes which have arisen and which have so far not been settled, are Bulgaria, Hungary and Romania obligated to carry out, respectively, the provisions of Article 36 of the Treaty with Bulgaria, Article 40 of the Treaty with Hungary, and Article 38 of the Treaty with Romania ?

The articles for the settlement of disputes provide that any dispute which is not settled by direct diplomatic negotiations shall be referred to the Three Heads of Mission. If not resolved by them within a period of two months, the dispute shall, unless the parties to the dispute agree upon another means of settlement, be referred at the request of either party to the dispute to a Commission composed of one representative of each party and a third member, to be selected in accordance with the relevant articles of the Treaties.

The diplomatic documents presented to the Court show that the United Kingdom and the United States of America on the one hand, and Bulgaria, Hungary and Romania on the other, have not succeeded in settling their disputes by direct negotiations. They further show that these disputes were not resolved by the Heads of Mission within the prescribed period of two months. It is a fact that the parties to the disputes have not agreed upon any other means of settlement. It is also a fact that the United Kingdom and the United States of America, after the expiry of the prescribed period, requested that the disputes should be settled by the Commissions mentioned in the Treaties.

This situation led the General Assembly to put Question II so as to obtain guidance for its future action.

The Court finds that all the conditions required for the commencement of the stage of the settlement of disputes by the Commissions have been fulfilled.

In view of the fact that the Treaties provide that any dispute shall be referred to a Commission "at the request of either party", it follows that either party is obligated, at the request of the other party, to co-operate in constituting the Commission, in particular by appointing its representative. Otherwise the method of settlement by Commissions provided for in the Treaties would completely fail in its purpose.

The reply to Question II, as interpreted above, must therefore be in the affirmative.

For these reasons,

THE COURT IS OF OPINION,

On Question I:

by eleven votes to three,

that the diplomatic exchanges between Bulgaria, Hungary and Romania on the one hand and certain Allied and Associated Powers signatories to the Treaties of Peace on the other, concerning the implementation of Article 2 of the Treaties with Bulgaria and Hungary and Article 3 of the Treaty with Romania, disclose disputes subject to the provisions for the settlement of disputes contained in Article 36 of the Treaty of Peace with Bulgaria, Article 40 of the Treaty of Peace with Hungary, and Article 38 of the Treaty of Peace with Romania;

On Question II:

by eleven votes to three,

that the Governments of Bulgaria, Hungary and Romania are obligated to carry out the provisions of those articles referred to in Question I, which relate to the settlement of disputes, including the provisions for the appointment of their representatives to the Treaty Commissions.

Done in French and English, the French text being authoritative, at the Peace Palace, The Hague, this thirtieth day of March, one thousand nine hundred and fifty, in two copies, one of which will

be placed in the archives of the Court and the other transmitted to the Secretary-General of the United Nations.

(*Signed*) BASDEVANT,
President.

(*Signed*) E. HAMBRO,
Registrar.

Judge AZEVEDO, while concurring in the Opinion of the Court, has availed himself of the right conferred on him by Article 57 of the Statute and appended to the Opinion a statement of his separate opinion.

Judges WINIARSKI, ZORIČIĆ and KRYLOV, considering that the Court should have declined to give an Opinion in this case, have availed themselves of the right conferred on them by Article 57 of the Statute and appended to the Opinion statements of their dissenting opinions.

(*Initialled*) J. B.
(*Initialled*) E. H.

ANNEX

DOCUMENTS TRANSMITTED TO THE INTERNATIONAL COURT OF JUSTICE BY THE SECRETARY-GENERAL OF THE UNITED NATIONS IN ACCORDANCE WITH THE RESOLUTION ADOPTED BY THE GENERAL ASSEMBLY ON 22 OCTOBER, 1949

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and

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Annex 5

COUR INTERNATIONALE DE JUSTICE

RECUEIL DES ARRÊTS,
AVIS CONSULTATIFS ET ORDONNANCES

SAHARA OCCIDENTAL

AVIS CONSULTATIF DU 16 OCTOBRE 1975

1975

INTERNATIONAL COURT OF JUSTICE

REPORTS OF JUDGMENTS,
ADVISORY OPINIONS AND ORDERS

WESTERN SAHARA

ADVISORY OPINION OF 16 OCTOBER 1975

Mode officiel de citation:

Sahara occidental,
avis consultatif, C.I.J. Recueil 1975, p. 12.

Official citation:

Western Sahara,
Advisory Opinion, I.C.J. Reports 1975, p. 12.

N° de vente: Sales number 414

INTERNATIONAL COURT OF JUSTICE

YEAR 1975

1975
16 October
General List
No. 61

16 October 1975

WESTERN SAHARA

Competence of the Court to give opinion requested—Propriety of giving the opinion—Relevance of lack of consent of a State concerned—Opinion requested to guide General Assembly in respect of its own future action—Alleged territorial dispute—Question of ascertainment of facts—Determination of object of questions in light of General Assembly resolution 3292 (XXIX) and basic principles governing decolonization—Temporal context of questions.

Concept of terra nullius *in Question I—Territory peopled by tribes—Significance of State practice at the period concerned—Western Sahara not treated as* terra nullius *in the process of colonization.*

Meaning of "legal ties" in Question II—Characteristics of Western Sahara—Morocco's claim to sovereignty on basis of immemorial possession—Relevance of special structure of Sherifian State—Evidence said to indicate internal display and international recognition of Moroccan sovereignty—Significance of the "Wad Noun shipwreck clause"—Anglo-Moroccan Agreement of 13 March 1895—Franco-German exchange of letters of 4 November 1911.

The "Mauritanian entity"—Features of the Bilad Shinguitti—Its relation to the Mauritanian entity—Criterion for determining whether what confronts the law is legally an entity—Meaning of "legal ties" used in conjunction with "Mauritanian entity"—Overlapping character of claims to legal ties.

Significance of purpose for which opinion is sought—Nature of legal ties and their relation to the decolonization of Western Sahara and the principle of self-determination.

ADVISORY OPINION

Present: *President* LACHS; *Vice-President* AMMOUN; *Judges* FORSTER, GROS, BENGZON, PETRÉN, ONYEAMA, DILLARD, IGNACIO-PINTO, DE CASTRO, MOROZOV, JIMÉNEZ DE ARÉCHAGA, Sir Humphrey WALDOCK, NAGENDRA SINGH, RUDA; *Judge* ad hoc BONI; *Registrar* AQUARONE.

Concerning certain questions relating to Western Sahara (Río de Oro and Sakiet El Hamra),

THE COURT,

composed as above,

gives the following Advisory Opinion:

1. The questions upon which the advisory opinion of the Court has been asked were laid before the Court by a letter dated 17 December 1974, filed in the Registry on 21 December 1974, addressed by the Secretary-General of the United Nations to the President of the Court. In his letter the Secretary-General informed the Court that, by resolution 3292 (XXIX) adopted on 13 December 1974, the General Assembly of the United Nations had decided to request the Court to give an advisory opinion at an early date on the questions set out in the resolution. The text of that resolution is as follows:

"*The General Assembly*,

Recalling its resolution 1514 (XV) of 14 December 1960 containing the Declaration on the Granting of Independence to Colonial Countries and Peoples,

Recalling also its resolutions 2072 (XX) of 16 December 1965, 2229 (XXI) of 20 December 1966, 2354 (XXII) of 19 December 1967, 2428 (XXIII) of 18 December 1968, 2591 (XXIV) of 16 December 1969, 2711 (XXV) of 14 December 1970, 2983 (XXVII) of 14 December 1972 and 3162 (XXVIII) of 14 December 1973,

Reaffirming the right of the population of the Spanish Sahara to self-determination in accordance with resolution 1514 (XV),

Considering that the persistence of a colonial situation in Western Sahara jeopardizes stability and harmony in the north-west African region,

Taking into account the statements made in the General Assembly on 30 September and 2 October 1974 by the Ministers for Foreign Affairs of the Kingdom of Morocco [1] and of the Islamic Republic of Mauritania [2],

Taking note of the statements made in the Fourth Committee by the representatives of Morocco [3] and Mauritania [4], in which the two countries acknowledged that they were both interested in the future of the Territory,

Having heard the statements by the representative of Algeria [5],

Having heard the statements by the representative of Spain [6],

(The references given below appear in the text adopted by the General Assembly.)

[1] A/PV.2249.

[2] A/PV.2251.

[3] A/C.4/SR.2117, 2125 and 2130.

[4] A/C.4/SR.2117 and 2130.

[5] A/PV.2265; A/C.4/SR.2125.

[6] A/PV 2253; A/C.4/SR.2117, 2125, 2126 and 2130.

Noting that during the discussion a legal controversy arose over the status of the said territory at the time of its colonization by Spain,

Considering, therefore, that it is highly desirable that the General Assembly, in order to continue the discussion of this question at its thirtieth session, should receive an advisory opinion on some important legal aspects of the problem,

Bearing in mind Article 96 of the Charter of the United Nations and Article 65 of the Statute of the International Court of Justice,

1. *Decides* to request the International Court of Justice, without prejudice to the application of the principles embodied in General Assembly resolution 1514 (XV), to give an advisory opinion at an early date on the following questions:

'I. Was Western Sahara (Río de Oro and Sakiet El Hamra) at the time of colonization by Spain a territory belonging to no one *(terra nullius)*?

If the answer to the first question is in the negative,

II. What were the legal ties between this territory and the Kingdom of Morocco and the Mauritanian entity?';

2. *Calls upon* Spain, in its capacity as administering Power in particular, as well as Morocco and Mauritania, in their capacity as interested parties, to submit to the International Court of Justice all such information and documents as may be needed to clarify those questions;

3. *Urges* the administering Power to postpone the referendum it contemplated holding in Western Sahara until the General Assembly decides on the policy to be followed in order to accelerate the decolonization process in the territory, in accordance with resolution 1514 (XV), in the best possible conditions, in the light of the advisory opinion to be given by the International Court of Justice;

4. *Reiterates* its invitation to all States to observe the resolutions of the General Assembly regarding the activities of foreign economic and financial interests in the Territory and to abstain from contributing by their investments or immigration policy to the maintenance of a colonial situation in the Territory;

5. *Requests* the Special Committee on the Situation with regard to the Implementation of the Declaration on the Granting of Independence to Colonial Countries and Peoples to keep the situation in the Territory under review, including the sending of a visiting mission to the Territory, and to report thereon to the General Assembly at its thirtieth session."

2. In a communication received in the Registry on 19 August 1975, the Secretary-General indicated that, owing to a technical error, the word "controversy" in the ninth paragraph of the preamble of the above resolution had been replaced by the word "difficulty" in the text originally transmitted to the President of the Court.

3. By letters dated 6 January 1975 the Registrar, pursuant to Article 66, paragraph 1, of the Statute of the Court, gave notice of the request for advisory opinion to all States entitled to appear before the Court.

4. The Court having decided, pursuant to Article 66, paragraph 2, of the Statute, that the States Members of the United Nations were likely to be able

to furnish information on the questions submitted, the President, by an Order dated 3 January 1975, fixed 27 March 1975 as the time-limit within which the Court would be prepared to receive written statements from them. Accordingly, the special and direct communication provided for in Article 66, paragraph 2, of the Statute was included in the letters addressed to those States on 6 January 1975.

5. The following States submitted written statements or letters to the Court in response to the Registry's communications: Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, France, Guatemala, Mauritania, Morocco, Nicaragua, Panama and Spain. The texts of these statements and letters were transmitted to the States Members of the United Nations, and to the Secretary-General of the United Nations, and made accessible to the public as from 22 April 1975.

6. In addition to its written statement, Spain submitted six volumes entitled "Information and Documents presented by the Spanish Government to the Court in accordance with paragraph 2 of resolution 3292 (XXIX) of the United Nations General Assembly", and two volumes of "Further Documents" submitted on the same basis. Morocco similarly submitted a large number of documents "in support of its written statement and in accordance with paragraph 2 of resolution 3292 (XXIX)". Mauritania likewise appended documentary annexes to its written statement. All three States provided cartographical material.

7. The Secretary-General of the United Nations, pursuant to Article 65, paragraph 2, of the Statute and Article 88 of the Rules of Court, transmitted to the Court a dossier of documents likely to throw light upon the question, together with an Introductory Note; this dossier was received in the Registry in several instalments, in the two official languages of the Court, between 18 February and 15 April 1975. On 23 April 1975 the Registrar transmitted to the States Members of the United Nations the Introductory Note and the list of the documents comprised in the dossier.

8. By letters dated 25 and 26 March 1975, respectively, Morocco and Mauritania each submitted a request for the appointment of a judge *ad hoc* to sit in the case. At public sittings held from 12 to 16 May 1975 the Court heard observations on this question from representatives of those States, as also of Spain and Algeria, which had likewise asked to be heard.

9. In an Order of 22 May 1975 (*I.C.J. Reports 1975*, pp. 6-10) the Court concluded that, for the purpose of the preliminary issue of its composition, the material submitted to it indicated that at the time of the adoption of resolution 3292 (XXIX):

> ". . . there appeared to be a legal dispute between Morocco and Spain regarding the Territory of Western Sahara; that the questions contained in the request for an opinion [might] be considered to be connected with that dispute; and that, in consequence, for purposes of application of Article 89 of the Rules of Court, the advisory opinion requested in that resolution appear[ed] to be one 'upon a legal question actually pending between two or more States';"

with regard to Mauritania, the Court concluded that the material submitted to it, while showing that at the time of the adoption of the resolution "Mauritania had previously adduced a series of considerations in support of its

particular interest in the territory of Western Sahara", indicated, for the purpose of the aforesaid preliminary issue, that at that time "there appeared to be no legal dispute between Mauritania and Spain regarding the Territory of Western Sahara; and that, in consequence, for purposes of application of Article 89 of the Rules of Court, the advisory opinion requested" appeared "not to be one 'upon a legal question actually pending' between those States"; those conclusions, the Court stated, "in no way prejudge[d] the *locus standi* of any interested State in regard to matters raised in the present case, nor [did] they prejudge the views of the Court with regard to the questions referred to it", or any other question which might fall to be decided in the further proceedings, including those of the Court's competence and the propriety of its exercise. The Court found accordingly that Morocco was entitled under Articles 31 and 68 of the Statute and Article 89 of the Rules of Court to choose a person to sit as judge *ad hoc*, but that, in the case of Mauritania, the conditions for the application of those Articles had not been satisfied.

10. Morocco had, in its communication of 25 March 1975 mentioned above chosen Mr. Alphonse Boni, President of the Supreme Court of the Ivory Coast, to sit as judge *ad hoc* in the case. Spain, consulted in accordance with Article 3, paragraph 1, of the Rules of Court, did not make any objection to this choice.

11. By a letter of 29 May 1975, the Registrar invited the Governments of the States Members of the United Nations to inform him whether they intended to take part in the oral proceedings. In addition to the four Governments which had already submitted observations during the hearings devoted to the question of the appointment of judges *ad hoc*, the Government of Zaire indicated that it proposed to submit its point of view to the Court. These Governments and the Secretary-General of the United Nations were informed that the date fixed for the opening of the oral proceedings was 25 June 1975. In the course of 27 public sittings, held between 25 June and 30 July 1975, oral statements were made to the Court by the following representatives:

for Morocco:
- H.E. Mr. Driss Slaoui, Ambassador, Permanent Representative to the United Nations;
- Mr. Magid Benjelloun, *Procureur général* at the Supreme Court of Morocco;
- Mr. Georges Vedel, *Doyen honoraire* of the Faculty of Law, Paris;
- Mr. René-Jean Dupuy, Professor at the Faculty of Law, Nice; member of the Institute of International Law;
- Mr. Mohamed Bennouna, Professor at the Faculty of Law, Rabat;
- Mr. Paul Isoart, Professor at the Faculty of Law, Nice;

for Mauritania:
- H.E. Mr. Moulaye el Hassen, Permanent Representative to the United Nations;
- Mr. Yedali Ould Cheikh, Assistant Secretary-General of the Office of the President;
- H.E. Mr. Mohamed Ould Maouloud, Ambassador;
- Mr. Jean Salmon, Professor in the Faculty of Law at the Université libre de Bruxelles;

for Zaire: Mr. Bayona-ba-Meya, Senior President of the Supreme Court of Zaire, Professor at the Faculty of Law, National University of Zaire;

for Algeria: H.E. Mr. Mohammed Bedjaoui, Ambassador of Algeria to France;

for Spain: H.E. Mr. Ramón Sedó, Ambassador of Spain to the Netherlands;
Mr. Santiago Martínez Caro, Director of the technical staff of the Minister for Foreign Affairs;
Mr. José M. Lacleta, Legal Adviser to the Ministry of Foreign Affairs;
Mr. Fernando Arias-Salgado, Legal Adviser to the Ministry of Foreign Affairs;
Mr. Julio González Campos, Ordinary Professor of International Law at the University of Oviedo.

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12. The Court will first consider certain matters regarding the procedure adopted in the present case. One is a suggestion that the Court ought to have suspended the proceedings on the substance of the questions referred to it and to have first confined itself to determining in interlocutory proceedings certain issues said to be preliminary: whether the Court is confronted with a legal question; whether there are compelling reasons for the Court's declining to reply to the request; what the eventual effect of the Court's findings may be in respect of the further process of decolonization of the territory. That these issues are of a purely preliminary character is, however, impossible to accept, particularly as they concern the object and nature of the request, the role of consent in the present proceedings, and the meaning and scope of the questions referred to the Court. Far from having a preliminary character, they constitute part of the substance of the case. Moreover, the procedure suggested, instead of facilitating the work of the Court, would have caused unwarranted delay in the discharge of the Court's functions and in its responding to the request of the General Assembly. In the event, the procedure adopted by the Court afforded a full opportunity for all the above issues to be examined, and in fact they were debated in extensive proceedings.

13. Another suggestion is that, before pronouncing on the requests made by Morocco and Mauritania for appointment of judges *ad hoc*, the Court ought to have decided with finality whether there was in this case a legal dispute between those States and Spain. However, as the Court said in the case concerning the *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)*:

"... the question whether a judge *ad hoc* should be appointed is of course a matter concerning the composition of the Bench and possesses ...

> absolute logical priority. It has to be settled prior to the opening of the oral proceedings, and indeed before any further issues, even of procedure, can be decided. Until it is disposed of the Court cannot proceed with the case. It is thus a logical necessity that any request for the appointment of a judge *ad hoc* must be treated as a preliminary matter on the basis of a prima facie appreciation of the facts and the law. This cannot be construed as meaning that the Court's decision thereon may involve the irrevocable disposal of a point of substance or of one related to the Court's competence . . . [T]o assert that the question of the judge *ad hoc* could not be validly settled until the Court had been able to analyse substantive issues is tantamount to suggesting that the composition of the Court could be left in suspense, and thus the validity of its proceedings left in doubt, until an advanced stage in the case." (*I.C.J. Reports 1971*, p. 25.)

It is also to be observed that, if the Court had subordinated its decision on the requests for judges *ad hoc* to a final conclusion on these allegedly preliminary issues, the practical result would have been that these issues – some of the most important and controverted in the case – would have been decided with the participation of a judge of Spanish nationality and without the question of judges *ad hoc* having been resolved.

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14. Under Article 65, paragraph 1, of the Statute:

> "The Court may give an advisory opinion on any legal question at the request of whatever body may be authorized by or in accordance with the Charter of the United Nations to make such a request."

The present request has been made pursuant to Article 96, paragraph 1, of the Charter of the United Nations, under which the General Assembly may seek the Court's advisory opinion on any legal question.

15. The questions submitted by the General Assembly have been framed in terms of law and raise problems of international law: whether a territory was *terra nullius* at the time of its colonization; what legal ties there were between that territory and the Kingdom of Morocco and the Mauritanian entity. These questions are by their very nature susceptible of a reply based on law; indeed, they are scarcely susceptible of a reply otherwise than on the basis of law. In principle, therefore, they appear to the Court to be questions of a legal character. It may be added that none of the States which have appeared before it have contended that the questions are not legal questions within the meaning of Article 96, paragraph 1, of the Charter and Article 65, paragraph 1, of the Statute. It is necessary, however, to consider the matter further, because doubts have been raised concerning the legal character of the questions in the particular circumstances of this case.

16. It has been suggested that the questions posed by the General Assembly are not legal, but are either factual or are questions of a purely historical or academic character.

17. It is true that, in order to reply to the questions, the Court will have to determine certain facts, before being able to assess their legal significance. However, a mixed question of law and fact is none the less a legal question within the meaning of Article 96, paragraph 1, of the Charter and Article 65, paragraph 1, of the Statute. As the Court observed in its Opinion concerning the *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)*:

> "In the view of the Court, the contingency that there may be factual issues underlying the question posed does not alter its character as a 'legal question' as envisaged in Article 96 of the Charter. The reference in this provision to legal questions cannot be interpreted as opposing legal to factual issues. Normally, to enable a court to pronounce on legal questions, it must also be acquainted with, take into account and, if necessary, make findings as to the relevant factual issues." (*I.C.J. Reports 1971*, p. 27.)

18. The questions put to the Court confine the period to be taken into consideration to the time of colonization by Spain. The view has been expressed that in order to be a "legal question" within the meaning of Article 65, paragraph 1, of the Statute, a question must not be of a historical character, but must concern or affect existing rights or obligations. Yet there is nothing in the Charter or Statute to limit either the competence of the General Assembly to request an advisory opinion, or the competence of the Court to give one, to legal questions relating to existing rights or obligations. There have been instances of Advisory Opinions which did not concern existing rights nor an actually pending issue (e.g., *Designation of the Workers' Delegate for the Netherlands at the Third Session of the International Labour Conference, Advisory Opinion, 1922, P.C.I.J., Series B, No. 1*). When confronted, in the advisory case concerning *Conditions of Admission of a State to Membership in the United Nations (Article 4 of Charter)*, with the proposition that the Court should not deal with a question couched in abstract terms, this Court rejected it in the following words:

> "That is a mere affirmation devoid of any justification. According to Article 96 of the Charter and Article 65 of the Statute, the Court may give an advisory opinion on any legal question, abstract or otherwise." (*I.C.J. Reports 1947-1948*, p. 61.)

And in its Advisory Opinion of 12 July 1973 the Court said:

> "The mere fact that it is not the rights of States which are in issue in the proceedings cannot suffice to deprive the Court of a competence expressly conferred on it by its Statute." (*Application for Review of*

Judgement No. 158 of the United Nations Administrative Tribunal, I.C.J. Reports 1973, p. 172.)

Although these pronouncements were made in somewhat different contexts, they indicate that the references to "any legal question" in the abovementioned provisions of the Charter and Statute are not to be interpreted restrictively.

19. Thus, to assert that an advisory opinion deals with a legal question within the meaning of the Statute only when it pronounces directly upon the rights and obligations of the States or parties concerned, or upon the conditions which, if fulfilled, would result in the coming into existence, modification or termination of such a right or obligation, would be to take too restrictive a view of the scope of the Court's advisory jurisdiction. It has undoubtedly been the usual situation for an advisory opinion of the Court to pronounce on existing rights and obligations, or on their coming into existence, modification or termination, or on the powers of international organs. However, the Court may also be requested to give its opinion on questions of law which do not call for any pronouncement of that kind, though they may have their place within a wider problem the solution of which could involve such matters. This does not signify that the Court is any the less competent to entertain the request if it is satisfied that the questions are in fact legal ones, and to give an opinion once it is satisfied that there is no compelling reason for declining to do so.

20. The Court accordingly finds that it is competent under Article 65, paragraph 1, of its Statute to entertain the present request, by which the General Assembly has referred to it questions embodying such concepts of law as *terra nullius* and legal ties, regardless of the fact that the Assembly has not requested the determination of existing rights and obligations. At the same time it appears from resolution 3292 (XXIX) that the opinion is sought for a practical and contemporary purpose, namely, in order that the General Assembly should be in a better position to decide at its thirtieth session on the policy to be followed for the decolonization of Western Sahara. However, the issue of the relevance and practical interest of the questions posed concerns, not the competence of the Court, but the propriety of its exercise. It is therefore in considering the subject of judicial propriety that the Court will examine the objection which has been raised in this connection, alleging that the questions are devoid of any useful object.

21. Similarly, the absence of an interested State's consent to the exercise of the Court's advisory jurisdiction does not concern the competence of the Court but the propriety of its exercise, as clearly appears from the Advisory Opinion concerning the *Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, First Phase*, to which reference will be made later. Hence, notwithstanding the fact that Spain has based on the absence of its consent an objection against the competence of the Court as well as the propriety of its exercise, it is in dealing with the latter that the Court will examine the issues raised by that lack of consent.

22. In sum, while the Court is satisfied of its competence to entertain the present request, it remains to be considered whether, in the circumstances of this case, it should exercise this competence or, on the contrary, decline to do so, whether on the grounds already referred to or for any other reason.

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23. Article 65, paragraph 1, of the Statute, which establishes the power of the Court to give an advisory opinion, is permissive and, under it, that power is of a discretionary character. In exercising this discretion, the International Court of Justice, like the Permanent Court of International Justice, has always been guided by the principle that, as a judicial body, it is bound to remain faithful to the requirements of its judicial character even in giving advisory opinions. If the question is a legal one which the Court is undoubtedly competent to answer, it may none the less decline to do so. As this Court has said in previous Opinions, the permissive character of Article 65, paragraph 1, gives it the power to examine whether the circumstances of the case are of such a character as should lead it to decline to answer the request. It has also said that the reply of the Court, itself an organ of the United Nations, represents its participation in the activities of the Organization and, in principle, should not be refused. By lending its assistance in the solution of a problem confronting the General Assembly, the Court would discharge its functions as the principal judicial organ of the United Nations. The Court has further said that only "compelling reasons" should lead it to refuse to give a requested advisory opinion (cf. *Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, First Phase, I.C.J. Reports 1950*, p. 72; *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), I.C.J. Reports 1971*, p. 27).

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24. Spain has put forward a series of objections which in its view would render the giving of an opinion in the present case incompatible with the Court's judicial character. Certain of these are based on the consequences said to follow from the absence of Spain's consent to the adjudication of the questions referred to the Court. Another relates to the alleged academic nature, irrelevance or lack of object of those questions. Spain has asked the Court to give priority to the examination of the latter. The Court will, however, deal with the objections founded on the lack of Spain's consent to adjudication of the questions, before turning to the objection which concerns the subject-matter of the questions themselves.

25. Spain has made a number of observations relating to the lack of its consent to the proceedings, which, it considers, should lead the Court to decline to give an opinion. These observations may be summarized as follows:

(a) In the present case the advisory jurisdiction is being used to circumvent the principle that jurisdiction to settle a dispute requires the consent of the parties.
(b) The questions, as formulated, raise issues concerning the attribution of territorial sovereignty over Western Sahara.

(c) The Court does not possess the necessary information concerning the relevant facts to enable it to pronounce judicially on the questions submitted to it.

26. The first of the above observations is based on the fact that on 23 September 1974 the Minister for Foreign Affairs of Morocco addressed a communication to the Minister for Foreign Affairs of Spain recalling the terms of a statement by which His Majesty King Hassan II had on 17 September 1974 proposed the joint submission to the International Court of Justice of an issue expressed in the following terms:

> "You, the Spanish Government, claim that the Sahara was *res nullius*. You claim that it was a territory or property left uninherited, you claim that no power and no administration had been established over the Sahara: Morocco claims the contrary. Let us request the arbitration of the International Court of Justice at The Hague . . . It will state the law on the basis of the titles submitted . . ."

Spain has stated before the Court that it did not consent and does not consent now to the submission of this issue to the jurisdiction of the Court.

27. Spain considers that the subject of the dispute which Morocco invited it to submit jointly to the Court for decision in contentious proceedings, and the subject of the questions on which the advisory opinion is requested, are substantially identical; thus the advisory procedure is said to have been used as an alternative after the failure of an attempt to make use of the contentious jurisdiction with regard to the same question. Consequently, to give a reply would, according to Spain, be to allow the advisory procedure to be used as a means of bypassing the consent of a State, which constitutes the basis of the Court's jurisdiction. If the Court were to countenance such a use of its advisory jurisdiction, the outcome would be to obliterate the distinction between the two spheres of the Court's jurisdiction, and the fundamental principle of the independence of States would be affected, for States would find their disputes with other States being submitted to the Court, by this indirect means, without their consent; this might result in compulsory jurisdiction being achieved by majority vote in a political organ. Such circumvention of the well-established principle of consent for the exercise of

international jurisdiction would constitute, according to this view, a compelling reason for declining to answer the request.

28. In support of these propositions Spain has invoked the fundamental rule, repeatedly reaffirmed in the Court's jurisprudence, that a State cannot, without its consent, be compelled to submit its disputes with other States to the Court's adjudication. It has relied, in particular, on the application of this rule to the advisory jurisdiction by the Permanent Court of International Justice in the *Status of Eastern Carelia* case *(P.C.I.J., Series B, No. 5)*, maintaining that the essential principle enunciated in that case is not modified by the decisions of the present Court in the cases concerning the *Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, First Phase* (*I.C.J. Reports 1950*, p. 65) and the *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)* (*I.C.J. Reports 1971*, p. 16). Morocco and Mauritania, on the other hand, have maintained that the present case falls within the principles applied in those two decisions and that the *ratio decidendi* of the *Status of Eastern Carelia* case is not applicable to it.

29. It is clear that Spain has not consented to the adjudication of the questions formulated in resolution 3292 (XXIX). It did not agree to Morocco's proposal for the joint submission to the Court of the issue raised in the communication of 23 September 1974. Spain made no reply to the letter setting out the proposal, and this was properly understood by Morocco as signifying its rejection by Spain. As to the request for an advisory opinion, the records of the discussions in the Fourth Committee and in the plenary of the General Assembly confirm that Spain raised objections to the Court's being asked for an opinion on the basis of the two questions formulated in the present request. The Spanish delegation stated that it was prepared to join in the request only if the questions put were supplemented by another question establishing a satisfactory balance between the historical and legal exposition of the matter and the current situation viewed in the light of the Charter of the United Nations and the relevant General Assembly resolutions on the decolonization of the territory. In view of Spain's persistent objections to the questions formulated in resolution 3292 (XXIX), the fact that it abstained and did not vote against the resolution cannot be interpreted as implying its consent to the adjudication of those questions by the Court. Moreover, its participation in the Court's proceedings cannot be understood as implying that it has consented to the adjudication of the questions posed in resolution 3292 (XXIX), for it has persistently maintained its objections throughout.

30. In other respects, however, Spain's position in relation to the present proceedings finds no parallel in the circumstances of the advisory proceedings concerning the *Status of Eastern Carelia* in 1923. In that case, one of the States concerned was neither a party to the Statute of the

Permanent Court nor, at the time, a Member of the League of Nations, and lack of competence of the League to deal with a dispute involving non-member States which refused its intervention was a decisive reason for the Court's declining to give an answer. In the present case, Spain is a Member of the United Nations and has accepted the provisions of the Charter and Statute; it has thereby in general given its consent to the exercise by the Court of its advisory jurisdiction. It has not objected, and could not validly object, to the General Assembly's exercise of its powers to deal with the decolonization of a non-self-governing territory and to seek an opinion on questions relevant to the exercise of those powers. In the proceedings in the General Assembly, Spain did not oppose the reference of the Western Sahara question as such to the Court's advisory jurisdiction: it objected rather to the restriction of that reference to the historical aspects of that question.

31. In the proceedings concerning the *Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, First Phase,* this Court had to consider how far the views expressed by the Permanent Court in the *Status of Eastern Carelia* case were still pertinent in relation to the applicable provisions of the Charter of the United Nations and the Statute of the Court. It stated, *inter alia*:

> "This objection reveals a confusion between the principles governing contentious procedure and those which are applicable to Advisory Opinions.
>
> The consent of States, parties to a dispute, is the basis of the Court's jurisdiction in contentious cases. The situation is different in regard to advisory proceedings even where the Request for an Opinion relates to a legal question actually pending between States. The Court's reply is only of an advisory character: as such, it has no binding force. It follows that no State, whether a Member of the United Nations or not, can prevent the giving of an Advisory Opinion which the United Nations considers to be desirable in order to obtain enlightenment as to the course of action it should take. The Court's Opinion is given not to the States, but to the organ which is entitled to request it; the reply of the Court, itself an 'organ of the United Nations', represents its participation in the activities of the organization, and, in principle, should not be refused." (*I.C.J. Reports 1950,* p. 71.)

32. The Court, it is true, affirmed in this pronouncement that its competence to give an opinion did not depend on the consent of the interested States, even when the case concerned a legal question actually pending between them. However, the Court proceeded not merely to stress its judicial character and the permissive nature of Article 65, paragraph 1, of the Statute but to examine, specifically in relation to the opposition of some of the interested States, the question of the judicial propriety of giving the opinion. Moreover, the Court emphasized the circumstances differentiating the case

then under consideration from the *Status of Eastern Carelia* case and explained the particular grounds which led it to conclude that there was no reason requiring the Court to refuse to reply to the request. Thus the Court recognized that lack of consent might constitute a ground for declining to give the opinion requested if, in the circumstances of a given case, considerations of judicial propriety should oblige the Court to refuse an opinion. In short, the consent of an interested State continues to be relevant, not for the Court's competence, but for the appreciation of the propriety of giving an opinion.

33. In certain circumstances, therefore, the lack of consent of an interested State may render the giving of an advisory opinion incompatible with the Court's judicial character. An instance of this would be when the circumstances disclose that to give a reply would have the effect of circumventing the principle that a State is not obliged to allow its disputes to be submitted to judicial settlement without its consent. If such a situation should arise, the powers of the Court under the discretion given to it by Article 65, paragraph 1, of the Statute, would afford sufficient legal means to ensure respect for the fundamental principle of consent to jurisdiction.

34. The situation existing in the present case is not, however, the one envisaged above. There is in this case a legal controversy, but one which arose during the proceedings of the General Assembly and in relation to matters with which it was dealing. It did not arise independently in bilateral relations. In a communication addressed on 10 November 1958 to the Secretary-General of the United Nations, the Spanish Government stated: "Spain possesses no non-self-governing territories, since the territories subject to its sovereignty in Africa are, in accordance with the legislation now in force, considered to be and classified as provinces of Spain". This gave rise to the "most explicit reservations" of the Government of Morocco, which, in a communication to the Secretary-General of 20 November 1958, stated that it "claim[ed] certain African territories at present under Spanish control as an integral part of Moroccan national territory".

35. On 12 October 1961, after Spain had agreed to transmit information on the territories in question, Morocco formulated in the Fourth Committee of the General Assembly "the strongest reservations" regarding any information Spain might submit concerning them. "Those cities and regions", it said, "formed an integral part of Morocco and the statutes at present governing them were contrary to international law and incompatible with the territorial sovereignty and integrity of Morocco". In answering these reservations, Spain drew attention, with reference to Western Sahara, to the statement it had made on 10 October 1961 in the General Assembly:

> "... the historic presence of Spanish citizens on the west coast of Africa, not subject to the sovereignty of any other country and devoting

themselves largely to fishing, goes back a very long way and has been confirmed by international law ... [T]he rulers of Morocco have recognized on repeated occasions that their sovereignty does not extend to the coasts of the present Spanish province of the Sahara".

36. The legal controversy which thus arose in the General Assembly in regard to Western Sahara remained in a latent state from 1966 to 1974, a period in which Morocco, without abandoning its legal position, accepted the application of the principle of self-determination. The controversy reappeared when Morocco directly presented to Spain its legal claim in the above communication of 23 September 1974, and continued to subsist; this communication, however, did not have the effect of detaching the dispute from the decolonization proceedings of the United Nations. The submission of the issue to the Court was explicitly proposed by Morocco "in order to guide the United Nations towards a final solution of the problem of Western Sahara . . .".

37. After it became a Member in 1960, Mauritania put forward in the United Nations the claim that Western Sahara was a part of its national territory. It was however prepared to acquiesce in the will of the population and did not confront Spain with a direct legal claim parallel to that of Morocco.

38. As previously noted, Spain considers that the terms of the Moroccan Note of 23 September 1974 and those of the request are substantially identical. This is not however the case. The questions in the request differ materially from those raised in the Moroccan proposal, in that the former introduces the issue of the ties of the territory with the Mauritanian entity and places the case referred to the Court in a different context. In the General Assembly debates the claims of Mauritania and Morocco to legal ties appeared, in many respects, as conflicting; in the oral proceedings before the Court they were described as overlapping in certain areas rather than as conflicting. The interaction between these two claims in respect of the same territory introduces, in either situation, a substantial difference, going beyond a mere broadening in the scope of the questions posed. In any event, the terms of the request contain a proviso concerning the application of General Assembly resolution 1514 (XV). Thus the legal questions of which the Court has been seised are located in a broader frame of reference than the settlement of a particular dispute and embrace other elements. These elements, moreover, are not confined to the past but are also directed to the present and the future.

39. The above considerations are pertinent for a determination of the object of the present request. The object of the General Assembly has not been to bring before the Court, by way of a request for advisory opinion, a dispute or legal controversy, in order that it may later, on the basis of the Court's opinion, exercise its powers and functions for the peaceful settlement

of that dispute or controversy. The object of the request is an entirely different one: to obtain from the Court an opinion which the General Assembly deems of assistance to it for the proper exercise of its functions concerning the decolonization of the territory.

40. The General Assembly, as appears from paragraph 3 of resolution 3292 (XXIX), has asked the Court for an opinion so as to be in a position to decide "on the policy to be followed in order to accelerate the decolonization process in the territory . . . in the best possible conditions, in the light of the advisory opinion . . .". The true object of the request is also stressed in the preamble of resolution 3292 (XXIX), where it is stated "that it is highly desirable that the General Assembly, in order to continue the discussion of this question at its thirtieth session, should receive an advisory opinion on some important legal aspects of the problem".

41. What the Court said in a similar context, in its Advisory Opinion on *Reservations to the Convention on the Prevention and Punishment of the Crime of Genocide,* applies also to the present case: "The object of this request for an Opinion is to guide the United Nations in respect of its own action." (*I.C.J. Reports 1951*, p. 19.) The legitimate interest of the General Assembly in obtaining an opinion from the Court in respect of its own future action cannot be affected or prejudiced by the fact that Morocco made a proposal, not accepted by Spain, to submit for adjudication by the Court a dispute raising issues related to those contained in the request. It is difficult to see on what basis the sending of the Note would make Spain's consent necessary for the reference of the questions to the Court, if that consent would not otherwise be needed.

42. Furthermore, the origin and scope of the dispute, as above described, are important in appreciating, from the point of view of the exercise of the Court's discretion, the real significance in this case of the lack of Spain's consent. The issue between Morocco and Spain regarding Western Sahara is not one as to the legal status of the territory today, but one as to the rights of Morocco over it at the time of colonization. The settlement of this issue will not affect the rights of Spain today as the administering Power, but will assist the General Assembly in deciding on the policy to be followed in order to accelerate the decolonization process in the territory. It follows that the legal position of the State which has refused its consent to the present proceedings is not "in any way compromised by the answers that the Court may give to the questions put to it" (*Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, First Phase, I.C.J. Reports 1950*, p. 72).

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43. A second way in which Spain has put the objection of lack of its consent is to maintain that the dispute is a territorial one and that the consent

of a State to adjudication of a dispute concerning the attribution of territorial sovereignty is always necessary. The questions in the request do not however relate to a territorial dispute, in the proper sense of the term, between the interested States. They do not put Spain's present position as the administering Power of the territory in issue before the Court: resolution 3292 (XXIX) itself recognizes the current legal status of Spain as administering Power. Nor is in issue before the Court the validity of the titles which led to Spain's becoming the administering Power of the territory, and this was recognized in the oral proceedings. The Court finds that the request for an opinion does not call for adjudication upon existing territorial rights or sovereignty over territory. Nor does the Court's Order of 22 May 1975 convey any implication that the present case relates to a claim of a territorial nature.

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44. A third way in which Spain, in its written statement, has presented its opposition to the Court's pronouncing upon the questions posed in the request is to maintain that in this case the Court cannot fulfil the requirements of good administration of justice as regards the determination of the facts. The attribution of territorial sovereignty, it argues, usually centres on material acts involving the exercise of that sovereignty, and the consideration of such acts and of the respective titles inevitably involves an exhaustive determination of facts. In advisory proceedings there are properly speaking no parties obliged to furnish the necessary evidence, and the ordinary rules concerning the burden of proof can hardly be applied. That being so, according to Spain, the Court should refrain from replying in the absence of facts which are undisputed, since it would not be in possession of sufficient information such as would be available in adversary proceedings.

45. Considerations of this kind played a role in the case concerning the *Status of Eastern Carelia*. In that instance, the non-participation of a State concerned in the case was a secondary reason for the refusal to answer. The Permanent Court of International Justice noted the difficulty of making an enquiry into facts concerning the main point of a controversy when one of the parties thereto refused to take part in the proceedings.

46. Although in that case the refusal of one State to take part in the proceedings was the cause of the inadequacy of the evidence, it was the actual lack of "materials sufficient to enable it to arrive at any judicial conclusion upon the question of fact" (*P.C.I.J., Series B, No. 5*, p. 28) which was considered by the Permanent Court, for reasons of judicial propriety, to prevent it from giving an opinion. Consequently, the issue is whether the Court has before it sufficient information and evidence to enable it to arrive at a judicial conclusion upon any disputed questions of fact the determination

of which is necessary for it to give an opinion in conditions compatible with its judicial character.

47. The situation in the present case is entirely different from that with which the Permanent Court was confronted in the *Status of Eastern Carelia* case. Mauritania, Morocco and Spain have furnished very extensive documentary evidence of the facts which they considered relevant to the Court's examination of the questions posed in the request, and each of these countries, as well as Algeria and Zaire, have presented their views on these facts and on the observations of the others. The Secretary-General has also furnished a dossier of documents concerning the discussion of the question of Western Sahara in the competent United Nations organs. The Court therefore considers that the information and evidence before it are sufficient to enable it to arrive at a judicial conclusion concerning the facts which are relevant to its opinion and necessary for replying to the two questions posed in the request.

* *

48. The Court has been asked to state that it ought not to examine the substance of the present request, since the reply to the questions put to it would be devoid of purpose. Spain considers that the United Nations has already affirmed the nature of the decolonization process applicable to Western Sahara in accordance with General Assembly resolution 1514 (XV); that the method of decolonization—a consultation of the indigenous population by means of a referendum to be conducted by the administering Power under United Nations auspices—has been settled by the General Assembly. According to Spain, the questions put to the Court are therefore irrelevant, and the answers cannot have any practical effect.

49. Morocco has expressed the view that the General Assembly has not finally settled the principles and techniques to be followed, being free to choose from a wide range of solutions in the light of two basic principles: that of self-determination indicated in paragraph 2 of resolution 1514 (XV), and the principle of the national unity and territorial integrity of countries, enunciated in paragraph 6 of the same resolution. Morocco points out that decolonization may come about through the reintegration of a province with the mother country from which it was detached in the process of colonization. Thus, in the view of Morocco, the questions are relevant because the Court's answer will place the General Assembly in a better position to choose the process best suited for the decolonization of the territory.

50. Mauritania maintains that the principle of self-determination cannot be dissociated from that of respect for national unity and territorial integrity; that the General Assembly examines each question in the context of the situations to be regulated; in several instances, it has been induced to give

priority to territorial integrity, particularly in situations where the territory had been created by a colonizing Power to the detriment of a State or country to which the territory belonged. Mauritania, pointing out that resolutions 1541 (XV) and 2625 (XXV) have laid down various methods and possibilities for decolonization, considers, in view of the foregoing, that the questions put to the Court are relevant and should be answered.

51. Algeria states that the self-determination of peoples is the fundamental principle governing decolonization, enshrined in Articles 1 and 55 of the Charter and in General Assembly resolution 1514 (XV); that, through successive resolutions which recommend that the population should be consulted as to its own future, the General Assembly has recognized the right of the people of Western Sahara to exercise free and genuine self-determination; and that the application of self-determination in the framework of such consultation has been accepted by the administering Power and supported by regional institutions and international conferences, as well as endorsed by the countries of the area. In the light of these considerations, Algeria is of the view that the Court should answer the request and, in doing so, should not disregard the fact that the General Assembly, in resolution 3292 (XXIX), has itself confirmed its will to apply resolution 1514 (XV), that is to say, a system of decolonization based on the self-determination of the people of Western Sahara.

52. Extensive argument and divergent views have been presented to the Court as to how, and in what form, the principles of decolonization apply in this instance, in the light of the various General Assembly resolutions on decolonization in general and on decolonization of the territory of Western Sahara in particular. This matter is not directly the subject of the questions put to the Court, but it is raised as a basis for an objection to the Court's replying to the request. In any event, the applicable principles of decolonization call for examination by the Court, in that they are an essential part of the framework of the questions contained in the request. The reference in those questions to a historical period cannot be understood to fetter or hamper the Court in the discharge of its judicial functions. That would not be consistent with the Court's judicial character; for in the exercise of its functions it is necessarily called upon to take into account existing rules of international law which are directly connected with the terms of the request and indispensable for the proper interpretation and understanding of its Opinion (cf. *I.C.J. Reports 1962*, p. 157).

53. The proposition that those questions are academic and legally irrelevant is intimately connected with their object, the determination of which requires the Court to consider, not only the whole text of resolution 3292 (XXIX), but also the general background and the circumstances which led to its adoption. This is so because resolution 3292 (XXIX) is the latest of a long series of General Assembly resolutions dealing with Western Sahara. All these resolutions, including resolution 3292 (XXIX), were drawn up in the general context of the policies of the General Assembly regarding the

decolonization of non-self-governing territories. Consequently, in order to appraise the correctness or otherwise of Spain's view as to the object of the questions posed, it is necessary to recall briefly the basic principles governing the decolonization policy of the General Assembly, the general lines of previous General Assembly resolutions on the question of Western Sahara, and the preparatory work and context of resolution 3292 (XXIX).

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54. The Charter of the United Nations, in Article 1, paragraph 2, indicates, as one of the purposes of the United Nations: "To develop friendly relations among nations based on respect for the principle of equal rights and self-determination of peoples..." This purpose is further developed in Articles 55 and 56 of the Charter. Those provisions have direct and particular relevance for non-self-governing territories, which are dealt with in Chapter XI of the Charter. As the Court stated in its Advisory Opinion of 21 June 1971 on *The Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)*:

> "... the subsequent development of international law in regard to non-self-governing territories, as enshrined in the Charter of the United Nations, made the principle of self-determination applicable to all of them" (*I.C.J. Reports 1971*, p. 31).

55. The principle of self-determination as a right of peoples, and its application for the purpose of bringing all colonial situations to a speedy end, were enunciated in the Declaration on the Granting of Independence to Colonial Countries and Peoples, General Assembly resolution 1514 (XV). In this resolution the General Assembly proclaims "the necessity of bringing to a speedy and unconditional end colonialism in all its forms and manifestations". To this end the resolution provides *inter alia*:

> "2. All peoples have the right to self-determination; by virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development.
>
> . . . .
>
> 5. Immediate steps shall be taken, in Trust and Non-Self-Governing Territories or all other territories which have not yet attained independence, to transfer all powers to the peoples of those territories, without any conditions or reservations, in accordance with their freely expressed will and desire, without any distinction as to race, creed or colour, in order to enable them to enjoy complete independence and freedom.

6. Any attempt aimed at the partial or total disruption of the national unity and the territorial integrity of a country is incompatible with the purpose and principles of the Charter of the United Nations."

The above provisions, in particular paragraph 2, thus confirm and emphasize that the application of the right of self-determination requires a free and genuine expression of the will of the peoples concerned.

56. The Court had occasion to refer to this resolution in the above-mentioned Advisory Opinion of 21 June 1971. Speaking of the development of international law in regard to non-self-governing territories, the Court there stated:

> "A further important stage in this development was the Declaration on the Granting of Independence to Colonial Countries and Peoples (General Assembly resolution 1514 (XV) of 14 December 1960), which embraces all peoples and territories which 'have not yet attained independence'." (*I.C.J. Reports 1971*, p. 31.)

It went on to state:

> "... the Court must take into consideration the changes which have occurred in the supervening half-century, and its interpretation cannot remain unaffected by the subsequent development of law, through the Charter of the United Nations and by way of customary law" (*ibid.*).

The Court then concluded:

> "In the domain to which the present proceedings relate, the last fifty years, as indicated above, have brought important developments. These developments leave little doubt that the ultimate objective of the sacred trust was the self-determination and independence of the peoples concerned. In this domain, as elsewhere, the *corpus iuris gentium* has been considerably enriched, and this the Court, if it is faithfully to discharge its functions, may not ignore." (*Ibid.*, pp. 31 f.)

57. General Assembly resolution 1514 (XV) provided the basis for the process of decolonization which has resulted since 1960 in the creation of many States which are today Members of the United Nations. It is complemented in certain of its aspects by General Assembly resolution 1541 (XV), which has been invoked in the present proceedings. The latter resolution contemplates for non-self-governing territories more than one possibility, namely:

(a) emergence as a sovereign independent State;
(b) free association with an independent State; or
(c) integration with an independent State.

At the same time, certain of its provisions give effect to the essential feature of the right of self-determination as established in resolution 1514 (XV). Thus

principle VII of resolution 1541 (XV) declares that: "Free association should be the result of a free and voluntary choice by the peoples of the territory concerned expressed through informed and democratic processes." Again, principle IX of resolution 1541 (XV) declares that:

> "Integration should have come about in the following circumstances:
>
> . . . .
>
> *(b)* The integration should be the result of the freely expressed wishes of the territory's peoples acting with full knowledge of the change in their status, their wishes having been expressed through informed and democratic processes, impartially conducted and based on universal adult suffrage. The United Nations could, when it deems it necessary, supervise these processes."

58. General Assembly resolution 2625 (XXV), "Declaration on Principles of International Law concerning Friendly Relations and Co-operation among States in accordance with the Charter of the United Nations", – to which reference was also made in the proceedings – mentions other possibilities besides independence, association or integration. But in doing so it reiterates the basic need to take account of the wishes of the people concerned:

> "The establishment of a sovereign and independent State, the free association or integration with an independent State or the emergence into any other political status *freely determined by a people* constitute modes of implementing the right of self-determination by that people." (Emphasis added.)

Resolution 2625 (XXV) further provides that:

> "Every State has the duty to promote, through joint and separate action, realization of the principle of equal rights and self-determination of peoples in accordance with the provisions of the Charter, and to render assistance to the United Nations in carrying out the responsibilities entrusted to it by the Charter regarding the implementation of the principle, in order:
>
> . . . .
>
> *(b)* To bring a speedy end to colonialism, having due regard to the freely expressed will of the peoples concerned."

59. The validity of the principle of self-determination, defined as the need to pay regard to the freely expressed will of peoples, is not affected by the fact that in certain cases the General Assembly has dispensed with the requirement of consulting the inhabitants of a given territory. Those instances were based either on the consideration that a certain population did not constitute a "people" entitled to self-determination or on the conviction that a consultation was totally unnecessary, in view of special circumstances.

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60. Having set out the basic principles governing the decolonization policy of the General Assembly, the Court now turns to those resolutions which bear specifically on the decolonization of Western Sahara. Their analysis is necessary in order to determine the validity of the view that the questions posed in resolution 3292 (XXIX) lack object. In particular it is pertinent to compare the different ways in which the General Assembly resolutions adopted from 1966 to 1969 dealt with the questions of Ifni and Western Sahara.

61. In 1966, in the Special Committee on the Situation with regard to the Implementation of the Declaration on the Granting of Independence to Colonial Countries and Peoples, Spain expressed itself in favour of the decolonization of Western Sahara through the exercise by the population of the territory of their right to self-determination. At that time this suggestion received the support of Mauritania and the assent of Morocco. As to Ifni, Spain suggested establishing contact with Morocco as a preliminary step. Morocco stated that the decolonization of Ifni should be brought into line with paragraph 6 of resolution 1514 (XV).

62. On the basis of the proposals of the Special Committee, the General Assembly adopted resolution 2229 (XXI), which dealt differently with Ifni and Western Sahara. In the case of Ifni, the resolution:

> "3. *Requests* the administering Power to take immediately the necessary steps to accelerate the decolonization of Ifni and to determine with the Government of Morocco, bearing in mind the aspirations of the indigenous population, procedures for the transfer of powers in accordance with the provisions of General Assembly resolution 1514 (XV)."

In the case of Western Sahara, the resolution:

> "4. *Invites* the administering Power to determine at the earliest possible date, in conformity with the aspirations of the indigenous people of Spanish Sahara and in consultation with the Governments of Mauritania and Morocco and any other interested party, the procedures for the holding of a referendum under United Nations auspices with a view to enabling the indigenous population of the Territory to exercise freely its right to self-determination . . ."

In respect of this territory the resolution also set out conditions designed to ensure the free expression of the will of the people, including the provision by the administering Power of "facilities to a United Nations mission so that it may be able to participate actively in the organization and holding of the referendum".

63. Resolution 2229 (XXI) was the model for a series of resolutions the provisions of which regarding Western Sahara were in their substance almost identical. Only a few minor variations were introduced. In 1967 the operative part of resolution 2354 (XXII) was divided into two sections, one dealing with Ifni and the other with Western Sahara; and in 1968 resolution 2428

(XXIII), similarly divided, included a preamble noting "the difference in nature of the legal status of these two Territories, as well as the processes of decolonization envisaged by General Assembly resolution 2354 (XXII) for these Territories". Since 1969 Ifni, having been decolonized by transfer to Morocco, has no longer appeared in the resolutions of the Assembly.

64. In subsequent years, the General Assembly maintained its approach to the question of Western Sahara, and reiterated in more pressing terms the need to consult the wishes of the people of the territory as to their political future. Indeed resolution 2983 (XXVII) of 1972 expressly reaffirms "the responsibility of the United Nations in all consultations intended to lead to the free expression of the wishes of the people". Resolution 3162 (XXVIII) of 1973, while deploring the fact that the United Nations mission whose active participation in the organization and holding of the referendum had been recommended since 1966 had not yet been able to visit the territory, reaffirms the General Assembly's:

> "... attachment to the principle of self-determination and its concern to see that principle applied with a framework that will guarantee the inhabitants of the Sahara under Spanish domination free and authentic expression of their wishes, in accordance with the relevant United Nations resolutions on the subject".

65. All these resolutions from 1966 to 1973 were adopted in the face of reminders by Morocco and Mauritania of their respective claims that Western Sahara constituted an integral part of their territory. At the same time Morocco and Mauritania assented to the holding of a referendum. These States, among others, alleging that the recommendations of the General Assembly were being disregarded by Spain, emphasized the need for the referendum to be held in satisfactory conditions and under the supervision of the United Nations.

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66. A significant change was introduced in resolution 3292 (XXIX) by which the Court is seised of the present request for an advisory opinion. The administering Power is urged in paragraph 3 of the resolution "to postpone the referendum it contemplated holding in Western Sahara". The General Assembly took special care, however, to insert provisions making it clear that such a postponement did not prejudice or affect the right of the people of Western Sahara to self-determination in accordance with resolution 1514 (XV).

67. The provisions in question contain three express references to resolution 1514 (XV). In the General Assembly debates the representative of the Ivory Coast, one of the sponsors of resolution 3292 (XXIX), after describing the text before the General Assembly as the result of a compromise, called attention to these references to resolution 1514 (XV),

explaining that they had been introduced into the original text in order to enable the General Assembly to be consistent. In the light of the terms of resolution 3292 (XXIX) this must be understood as indicating the intention to ensure the consistency of that resolution with previous resolutions of the General Assembly.

68. The third paragraph in the preamble of resolution 3292 (XXIX) reaffirms "the right of the population of the Spanish Sahara to self-determination in accordance with resolution 1514 (XV)". In paragraph 1 of the operative part, where the questions asked of the Court are formulated, the Court is requested, "without prejudice to the application of the principles embodied in General Assembly resolution 1514 (XV)", to give its advisory opinion. This mention of resolution 1514 (XV) is thus made to relate to the actual request for the opinion. The reference to the application of the principles embodied in resolution 1514 (XV) has necessarily to be read in the light of the General Assembly's reaffirmation in the third paragraph of the preamble of "the right of the population of the Spanish Sahara to self-determination in accordance with resolution 1514 (XV)".

69. In paragraph 3 of the operative part it is urged that the referendum be postponed "until the General Assembly decides on the policy to be followed in order to accelerate the decolonization process in the territory, in accordance with resolution 1514 (XV)". This third mention of resolution 1514 (XV), which has also to be read in the light of the preamble, thus refers to it as governing "the decolonization process in the territory" and "the policy to be followed in order to accelerate" that process.

70. In short, the decolonization process to be accelerated which is envisaged by the General Assembly in this provision is one which will respect the right of the population of Western Sahara to determine their future political status by their own freely expressed will. This right is not affected by the present request for an advisory opinion, nor by resolution 3292 (XXIX); on the contrary, it is expressly reaffirmed in that resolution. The right of that population to self-determination constitutes therefore a basic assumption of the questions put to the Court.

71. It remains to be ascertained whether the application of the right of self-determination to the decolonization of Western Sahara renders without object the two specific questions put to the Court. The Court has already concluded that the two questions must be considered in the whole context of the decolonization process. The right of self-determination leaves the General Assembly a measure of discretion with respect to the forms and procedures by which that right is to be realized.

72. An advisory opinion of the Court on the legal status of the territory at the time of Spanish colonization and on the nature of any ties then existing with Morocco and with the Mauritanian entity may assist the General Assembly in the future decisions which it is called upon to take. The General Assembly has referred to its intention to "continue its discussion of this question" in the light of the Court's advisory opinion. The Court, when

considering the object of the questions in accordance with the text of resolution 3292 (XXIX), cannot fail to note this statement. As to the future action of the General Assembly, various possibilities exist, for instance with regard to consultations between the interested States, and the procedures and guarantees required for ensuring a free and genuine expression of the will of the people. In general, an opinion given by the Court in the present proceedings will furnish the General Assembly with elements of a legal character relevant to its further treatment of the decolonization of Western Sahara.

73. In any event, to what extent or degree its opinion will have an impact on the action of the General Assembly is not for the Court to decide. The function of the Court is to give an opinion based on law, once it has come to the conclusion that the questions put to it are relevant and have a practical and contemporary effect and, consequently, are not devoid of object or purpose.

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74. In the light of the considerations set out in paragraphs 23-73 above, the Court finds no compelling reason, in the circumstances of the present case, to refuse to comply with the request by the General Assembly for an advisory opinion.

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75. Having established that it is seised of a request for advisory opinion which it is competent to entertain and that it should comply with that request, the Court will now examine the two questions which have been referred to it by General Assembly resolution 3292 (XXIX). These questions are so formulated that an answer to the second is called for only if the answer to the first is in the negative:

> "I. Was Western Sahara (Río de Oro and Sakiet El Hamra) at the time of colonization by Spain a territory belonging to no one *(terra nullius)*?
>
> If the answer to the first question is in the negative,
>
> II. What were the legal ties between this territory and the Kingdom of Morocco and the Mauritanian entity?"

The suggestion has been made that the two questions are so far connected in substance that an affirmative answer could scarcely be given to the first question without also investigating the answer to be given to the second. It is possible, however, that, in the actual circumstances of the case, a negative answer to the first question may be called for irrespective of the Court's

conclusions regarding the answer to be given to the second. Accordingly, the two questions will be taken up separately and in turn.

76. The request, by its express terms, relates Question I specifically to the time of colonization of Western Sahara (Río de Oro and Sakiet El Hamra) by Spain. Similarly, by making the second question conditional upon the answer to the first and by formulating it in the past tense, the request also unmistakably relates the second question to that same period. Consequently, before embarking on its examination of the questions, the Court has to determine what, for the purposes of the present Opinion, should be considered "the time of colonization by Spain". In this connection, it emphasizes that it is not here concerned to establish a "critical date" in the sense given to this term in territorial disputes; for the questions do not ask the Court to adjudicate between conflicting legal titles to Western Sahara. It is here concerned only to identify the period of the historical context in which the request places the questions referred to the Court and the answers to be given to those questions.

77. In the view of the Court, for the purposes of the present Opinion, "the time of colonization by Spain" may be considered as the period beginning in 1884, when Spain proclaimed a protectorate over the Río de Oro. It is true that Spain has mentioned certain earlier acts of alleged display of Spanish sovereignty in the fifteenth and sixteenth centuries. But it has explained that it did so only to enlighten the Court as to the remote antecedents of the Spanish presence on the west-African coast, and not to prove any continuity between those acts and "the time of colonization by Spain", which it conceded should be regarded as beginning in 1884. In any event, the information before the Court convinces it that the period beginning in 1884 represents "the time of colonization by Spain" of Western Sahara within the meaning of the request and constitutes the temporal context within which the two questions are placed by the terms of the request.

78. Although the Court has thus been asked to render an opinion solely upon the legal status and legal ties of Western Sahara as these existed at the period beginning in 1884, this does not mean that any information regarding its legal status or legal ties at other times is wholly without relevance for the purposes of this Opinion. It does, however, mean that such information has present relevance only in so far as it may throw light on the questions as to what were the legal status and the legal ties of Western Sahara at that period.

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79. Turning to Question I, the Court observes that the request specifically locates the question in the context of "the time of colonization by Spain", and it therefore seems clear that the words "Was Western Sahara ... a territory belonging to no one *(terra nullius)*?" have to be interpreted by reference to the

law in force at that period. The expression *"terra nullius"* was a legal term of art employed in connection with "occupation" as one of the accepted legal methods of acquiring sovereignty over territory. "Occupation" being legally an original means of peaceably acquiring sovereignty over territory otherwise than by cession or succession, it was a cardinal condition of a valid "occupation" that the territory should be *terra nullius* – a territory belonging to no-one – at the time of the act alleged to constitute the "occupation" (cf. *Legal Status of Eastern Greenland, P.C.I.J., Series A/B, No. 53,* pp. 44 f. and 63 f.). In the view of the Court, therefore, a determination that Western Sahara was a *"terra nullius"* at the time of colonization by Spain would be possible only if it were established that at that time the territory belonged to no-one in the sense that it was then open to acquisition through the legal process of "occupation".

80. Whatever differences of opinion there may have been among jurists, the State practice of the relevant period indicates that territories inhabited by tribes or peoples having a social and political organization were not regarded as *terrae nullius.* It shows that in the case of such territories the acquisition of sovereignty was not generally considered as effected unilaterally through "occupation" of *terra nullius* by original title but through agreements concluded with local rulers. On occasion, it is true, the word "occupation" was used in a non-technical sense denoting simply acquisition of sovereignty; but that did not signify that the acquisition of sovereignty through such agreements with authorities of the country was regarded as an "occupation" of a *"terra nullius"* in the proper sense of these terms. On the contrary, such agreements with local rulers, whether or not considered as an actual "cession" of the territory, were regarded as derivative roots of title, and not original titles obtained by occupation of *terrae nullius.*

81. In the present instance, the information furnished to the Court shows that at the time of colonization Western Sahara was inhabited by peoples which, if nomadic, were socially and politically organized in tribes and under chiefs competent to represent them. It also shows that, in colonizing Western Sahara, Spain did not proceed on the basis that it was establishing its sovereignty over *terrae nullius.* In its Royal Order of 26 December 1884, far from treating the case as one of occupation of *terra nullius,* Spain proclaimed that the King was taking the Río de Oro under his protection on the basis of agreements which had been entered into with the chiefs of the local tribes: the Order referred expressly to "the documents which the independent tribes of this part of the coast" had "signed with the representative of the Sociedad Española de Africanistas", and announced that the King had confirmed "the deeds of adherence" to Spain. Likewise, in negotiating with France concerning the limits of Spanish territory to the north of the Río de Oro, that is, in the Sakiet El Hamra area, Spain did not rely upon any claim to the acquisition of sovereignty over a *terra nullius.*

82. Before the Court, differing views were expressed concerning the nature and legal value of agreements between a State and local chiefs. But the Court

is not asked by Question I to pronounce upon the legal character or the legality of the titles which led to Spain becoming the administering Power of Western Sahara. It is asked only to state whether Western Sahara (Río de Oro and Sakiet El Hamra) at the time of colonization by Spain was "a territory belonging to no one *(terra nullius)*". As to this question, the Court is satisfied that, for the reasons which it has given, its answer must be in the negative. Accordingly, the Court does not find it necessary first to pronounce upon the correctness or otherwise of Morocco's view that the territory was not *terra nullius* at that time because the local tribes, so it maintains, were then subject to the sovereignty of the Sultan of Morocco; nor upon Mauritania's corresponding proposition that the territory was not *terra nullius* because the local tribes, in its view, then formed part of the "Bilad Shinguitti" or Mauritanian entity. Any conclusions that the Court may reach with respect to either of these points of view cannot change the negative character of the answer which, for other reasons already set out, it has found that it must give to Question I.

83. The Court's answer to Question I is, therefore, in the negative and, in accordance with the terms of the request, it will now turn to Question II.

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84. Question II asks the Court to state "what were the legal ties between this territory" – that is, Western Sahara – "and the Kingdom of Morocco and the Mauritanian entity". The scope of this question depends upon the meaning to be attached to the expression "legal ties" in the context of the time of the colonization of the territory by Spain. That expression, however, unlike *"terra nullius"* in Question I, was not a term having in itself a very precise meaning. Accordingly, in the view of the Court, the meaning of the expression "legal ties" in Question II has to be found rather in the object and purpose of General Assembly resolution 3292 (XXIX), by which it was decided to request the present advisory opinion of the Court.

85. Analysis of this resolution, as the Court has already pointed out, shows that the two questions contained in the request have been put to the Court in the context of proceedings in the General Assembly directed to the decolonization of Western Sahara in conformity with resolution 1514 (XV) of 14 December 1960. During the discussion of this item, according to resolution 3292 (XXIX), a legal controversy arose over the status of Western Sahara at the time of its colonization by Spain; and the records of the proceedings make it plain that the "legal controversy" in question concerned pretensions put forward, on the one hand, by Morocco that the territory was then a part of the Sherifian State and, on the other, by Mauritania that the territory then formed part of the Bilad Shinguitti or Mauritanian entity. Accordingly, it appears to the Court that in Question II the words "legal ties between this territory and the Kingdom of Morocco and the Mauritanian

entity" must be understood as referring to such "legal ties" as may affect the policy to be followed in the decolonization of Western Sahara. In this connection, the Court cannot accept the view that the legal ties the General Assembly had in mind in framing Question II were limited to ties established directly with the territory and without reference to the people who may be found in it. Such an interpretation would unduly restrict the scope of the question, since legal ties are normally established in relation to people.

86. The Court further observes that, inasmuch as Question II had its origin in the contentions of Morocco and Mauritania, it was for them to satisfy the Court in the present proceedings that legal ties existed between Western Sahara and the Kingdom of Morocco or the Mauritanian entity at the time of the colonization of the territory by Spain.

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87. Western Sahara (Río de Oro and Sakiet El Hamra) is a territory having very special characteristics which, at the time of colonization by Spain, largely determined the way of life and social and political organization of the peoples inhabiting it. In consequence, the legal régime of Western Sahara, including its legal relations with neighbouring territories, cannot properly be appreciated without reference to these special characteristics. The territory forms part of the great Sahara desert which extends from the Atlantic coast of Africa to Egypt and the Sudan. At the time of its colonization by Spain, the area of this desert with which the Court is concerned was being exploited, because of its low and spasmodic rainfall, almost exclusively by nomads, pasturing their animals or growing crops as and where conditions were favourable. It may be said that the territory, at the time of its colonization, had a sparse population that, for the most part, consisted of nomadic tribes the members of which traversed the desert on more or less regular routes dictated by the seasons and the wells or water-holes available to them. In general, the Court was informed, the right of pasture was enjoyed in common by these tribes; some areas suitable for cultivation, on the other hand, were subject to a greater degree to separate rights. Perennial water-holes were in principle considered the property of the tribe which put them into commission, though their use also was open to all, subject to certain customs as to priorities and the amount of water taken. Similarly, many tribes were said to have their recognized burial grounds, which constituted a rallying point for themselves and for allied tribes. Another feature of life in the region, according to the information before the Court, was that inter-tribal conflict was not infrequent.

88. These various points of attraction of a tribe to particular localities were reflected in its nomadic routes. But what is important for present purposes is the fact that the sparsity of the resources and the spasmodic character of the

rainfall compelled all those nomadic tribes to traverse very wide areas of the desert. In consequence, the nomadic routes of none of them were confined to Western Sahara; some passed also through areas of southern Morocco, or of present-day Mauritania or Algeria, and some even through further countries. All the tribes were of the Islamic faith and the whole territory lay within the Dar al-Islam. In general, authority in the tribe was vested in a sheikh, subject to the assent of the "Juma'a", that is, of an assembly of its leading members, and the tribe had its own customary law applicable in conjunction with the Koranic law. Not infrequently one tribe had ties with another, either of dependence or of alliance, which were essentially tribal rather than territorial, ties of allegiance or vassalage.

89. It is in the context of such a territory and such a social and political organization of the population that the Court has to examine the question of the "legal ties" between Western Sahara and the Kingdom of Morocco and the Mauritanian entity at the time of colonization by Spain. At the conclusion of the oral proceedings, as will be seen, Morocco and Mauritania took up what was almost a common position on the answer to be given by the Court on Question II. The contentions on which they respectively base the legal ties which they claim to have had with Western Sahara at the time of its colonization by Spain are, however, different and in some degree opposed. The Court will, therefore, examine them separately.

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90. Morocco's claim to "legal ties" with Western Sahara at the time of colonization by Spain has been put to the Court as a claim to ties of sovereignty on the ground of an alleged immemorial possession of the territory. This immemorial possession, it maintains, was based not on an isolated act of occupation but on the public display of sovereignty, uninterrupted and uncontested, for centuries.

91. In support of this claim Morocco refers to a series of events stretching back to the Arab conquest of North Africa in the seventh century A.D., the evidence of which is, understandably, for the most part taken from historical works. The far-flung, spasmodic and often transitory character of many of these events renders the historical material somewhat equivocal as evidence of possession of the territory now in question. Morocco, however, invokes *inter alia* the decision of the Permanent Court of International Justice in the *Legal Status of Eastern Greenland* case *(P.C.I.J., Series A/B, No. 53).* Stressing that during a long period Morocco was the only independent State which existed in the north-west of Africa, it points to the geographical contiguity of Western Sahara to Morocco and the desert character of the territory. In the light of these considerations, it maintains that the historical material suffices to establish Morocco's claim to a title based "upon continued display of authority" (*loc. cit.*, p. 45) on the same principles as those applied

by the Permanent Court in upholding Denmark's claim to possession of the whole of Greenland.

92. This method of formulating Morocco's claims to ties of sovereignty with Western Sahara encounters certain difficulties. As the Permanent Court stated in the case concerning the *Legal Status of Eastern Greenland,* a claim to sovereignty based upon continued display of authority involves "two elements each of which must be shown to exist: the intention and will to act as sovereign, and some actual exercise or display of such authority" (*ibid.*, pp. 45 f). True, the Permanent Court recognized that in the case of claims to sovereignty over areas in thinly populated or unsettled countries, "very little in the way of actual exercise of sovereign rights" (*ibid.*, p. 46) might be sufficient in the absence of a competing claim. But, in the present instance, Western Sahara, if somewhat sparsely populated, was a territory across which socially and politically organized tribes were in constant movement and where armed incidents between these tribes were frequent. In the particular circumstances outlined in paragraphs 87 and 88 above, the paucity of evidence of actual display of authority unambiguously relating to Western Sahara renders it difficult to consider the Moroccan claim as on all fours with that of Denmark in the *Eastern Greenland* case. Nor is the difficulty cured by introducing the argument of geographical unity or contiguity. In fact, the information before the Court shows that the geographical unity of Western Sahara with Morocco is somewhat debatable, which also militates against giving effect to the concept of contiguity. Even if the geographical contiguity of Western Sahara with Morocco could be taken into account in the present connection, it would only make the paucity of evidence of unambiguous display of authority with respect to Western Sahara more difficult to reconcile with Morocco's claim to immemorial possession.

93. In the view of the Court, however, what must be of decisive importance in determining its answer to Question II is not indirect inferences drawn from events in past history but evidence directly relating to effective display of authority in Western Sahara at the time of its colonization by Spain and in the period immediately preceding that time (cf. *Minquiers and Ecrehos, Judgment, I.C.J. Reports 1953*, p. 57). As Morocco has also adduced specific evidence relating to the time of colonization and the period preceding it, the Court will now consider that evidence.

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94. Morocco requests that, in appreciating the evidence, the Court should take account of the special structure of the Sherifian State. No rule of international law, in the view of the Court, requires the structure of a State to follow any particular pattern, as is evident from the diversity of the forms of

State found in the world today. Morocco's request is therefore justified. At the same time, where sovereignty over territory is claimed, the particular structure of a State may be a relevant element in appreciating the reality or otherwise of a display of State activity adduced as evidence of that sovereignty.

95. That the Sherifian State at the time of the Spanish colonization of Western Sahara was a State of a special character is certain. Its special character consisted in the fact that it was founded on the common religious bond of Islam existing among the peoples and on the allegiance of various tribes to the Sultan, through their caids or sheikhs, rather than on the notion of territory. Common religious links have, of course, existed in many parts of the world without signifying a legal tie of sovereignty or subordination to a ruler. Even the Dar al-Islam, as Morocco itself pointed out in its oral statement, knows and then knew separate States within the common religious bond of Islam. Political ties of allegiance to a ruler, on the other hand, have frequently formed a major element in the composition of a State. Such an allegiance, however, if it is to afford indications of the ruler's sovereignty, must clearly be real and manifested in acts evidencing acceptance of his political authority. Otherwise, there will be no genuine display or exercise of State authority. It follows that the special character of the Moroccan State and the special forms in which its exercise of sovereignty may, in consequence, have expressed itself, do not dispense the Court from appreciating whether at the relevant time Moroccan sovereignty was effectively exercised or displayed in Western Sahara.

96. It has been stated before the Court, and not disputed in the course of the proceedings, that at the relevant period the Moroccan State consisted partly of what was called the Bled Makhzen, areas actually subject to the Sultan, and partly of what was called the Bled Siba, areas in which *de facto* the tribes were not submissive to the Sultan. Morocco states that the two expressions, Bled Makhzen and Bled Siba, merely described two types of relationship between the Moroccan local authorities and the central power, not a territorial separation; and that the existence of these different types did not affect the unity of Morocco. Because of a common cultural heritage, the spiritual authority of the Sultan was always accepted. Thus the difference between the Bled Makhzen and the Bled Siba, Morocco maintains, did not reflect a wish to challenge the existence of the central power so much as the conditions for the exercise of that power; and the Bled Siba was, in practice, a way of affecting an administrative decentralization of authority. Against this view it is stated that what characterized the Bled Siba was that it was not administered by the Makhzen; it did not contribute contingents to the Sherifian army; no taxes were collected there by the Makhzen; the government of the people was in the hands of caids appointed by the tribes, and their powers were derived more from the acquiescence of the tribes than from any delegation of authority by the Sultan; even if these local powers did not totally reject any connection with the Sherifian State, in reality they

became *de facto* independent powers. It is also said that the historical evidence shows the territory between the Souss and the Dra'a to have been in a state of permanent insubordination and part of the Bled Siba; and that this implies that there was no effective and continuous display of State functions even in those areas to the north of Western Sahara. In the present proceedings, it has been common ground between Mauritania, Morocco and Spain that the Bled Siba was considered as forming part of the Moroccan State at that time, as also appears from the information before the Court.

97. That the areas immediately to the north of Western Sahara lay within the Bled Siba at the relevant period is a point which does not appear to be in dispute. This is accordingly an element to be taken into consideration in appreciating the material which has been submitted regarding the alleged display of Moroccan authority in Western Sahara itself.

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98. As evidence of its display of sovereignty in Western Sahara, Morocco has invoked alleged acts of internal display of Moroccan authority and also certain international acts said to constitute recognition by other States of its sovereignty over the whole or part of the territory.

99. The principal indications of "internal" display of authority invoked by Morocco consist of evidence alleged to show the allegiance of Saharan caids to the Sultan, including dahirs and other documents concerning the appointment of caids, the alleged imposition of Koranic and other taxes, and what were referred to as "military decisions" said to constitute acts of resistance to foreign penetration of the territory. In particular, the allegiance is claimed of the confederation of Tekna tribes, together with its allies, one part of which was stated to be established in the Noun and another part to lead a nomadic life the route of which traversed areas of Western Sahara: through Tekna caids, Morocco claims, the Sultan's authority and influence were exercised on the nomad tribes pasturing in Western Sahara. Moreover, Morocco alleges that, after the marabout Ma ul-'Aineen established himself at Smara in the Sakiet El Hamra in the late 1890s, much of the territory came under the direct authority of this sheikh, and that he himself was the personal representative of the Sultan. Emphasis is also placed by Morocco on two visits of Sultan Hassan I in person to the southern area of the Souss in 1882 and 1886 to maintain and strengthen his authority in the southern part of his realm, and on the despatch of arms by the Sultan to Ma ul-'Aineen and others in the south to reinforce their resistance to foreign penetration. In general, it is urged that Western Sahara has always been linked to the interior of Morocco by common ethnological, cultural and religious ties, and that the Sakiet El Hamra was artificially separated from the Moroccan territory of the Noun by colonization.

100. Spain, on the other hand, maintains that there is a striking absence of any documentary evidence or other traces of a display of political authority by Morocco with respect to Western Sahara. The acts of appointment of caids produced by Morocco, whether dahirs or official correspondence, do not in Spain's view relate to Western Sahara but to areas within southern Morocco such as the Noun and the Dra'a; nor has any document of acceptance by the recipients been adduced. Furthermore, according to Spain, these alleged appointments as caid were conferred on sheikhs already elected by their own tribes and were, in truth, only titles of honour bestowed on existing and *de facto* independent local rulers. As to the Tekna confederation, its two parts are said to have been in quite different relations to the Sultan: only the settled Tekna, established in southern Morocco, acknowledged their political allegiance to the Sultan, while the nomadic septs of the tribe who traversed the Western Sahara were "free" Tekna, autonomous and independent of the Sultan. Nor was Ma ul-'Aineen, according to Spain, at any time the personal representative of the Sultan's authority in Western Sahara; on the contrary, he exercised his authority to the south of the Dra'a in complete independence of the Sultan; his relations with the Sultan were based on mutual respect and a common interest in resisting French expansion from the south; they were relations of equality, not political ties of allegiance or of sovereignty.

101. Further, Spain invokes the absence of any evidence of the payment of taxes by tribes of Western Sahara and denies all possibility of such evidence being adduced; according to Spain, it was a characteristic even of the Bled Siba that the tribes refused to be taxed, and in Western Sahara there was no question of taxes having been paid to the Makhzen. As to the Sultan's expeditions of 1882 and 1886, these, according to Spain, are shown by the historical evidence never to have reached Western Sahara or even the Dra'a, but only the Souss and the Noun; nor did they succeed in completely subjecting even those areas; and they cannot therefore constitute evidence of display of authority with respect to Western Sahara. Their purpose, Spain maintains, was to prevent commerce between Europeans and the tribes of the Souss and Noun, and this purpose was unrelated to Western Sahara. Again, the alleged acts of resistance in Western Sahara to foreign penetration are said by Spain to have been nothing more than occasional raids to obtain booty or hostages for ransom and to have nothing to do with display of Moroccan authority. In general, both on geographical and on other grounds, Spain questions the unity of the Saharan region with the regions of southern Morocco.

102. Mauritania's views, in so far as they relate to Morocco's pretensions to have exercised sovereignty over Western Sahara at the time of its colonization, may be summarized as follows: Mauritania does not oppose Morocco's claim to have displayed its authority in some, more northerly,

areas of the territory. Thus it does not dispute the allegiance at that time of the Tekna confederation to the Sultan, nor Morocco's claim that, through the intermediary of Tekna caids in southern Morocco, it exercised a measure of authority over Tekna nomads who traversed those areas of Western Sahara. Mauritania does not, however, admit the allegiance of other tribes in Western Sahara to the Sultan, as it considers them to belong to the Bilad Shinguitti, or Mauritanian entity. In particular, like Spain, it maintains that the Regheibat were a tribe of marabout warriors wholly independent of both the Tekna caids and the Sultan, and that their links were rather with the tribes of the Bilad Shinguitti. Again, Mauritania does not admit that the marabout sheikh, Ma ul-'Aineen, represented the authority of the Sultan in Western Sahara. Instead, it insists that he was a Shinguitti personality, who acquired influence and renown as head of a religious brotherhood in the Bilad Shinguitti and also became a political figure in the Sakiet El Hamra in the later stages of his life. Like Spain also, Mauritania maintains that, as a political figure organizing and leading resistance to French penetration, Ma ul-'Aineen dealt with the Sultan on a basis of co-operation between equals; and that the relation between them was not one of allegiance but of an alliance, lasting only until the time came when the sheikh proclaimed himself Sultan.

103. The Court does not overlook the position of the Sultan of Morocco as a religious leader. In the view of the Court, however, the information and arguments invoked by Morocco cannot, for the most part, be considered as disposing of the difficulties in the way of its claim to have exercised effectively internal sovereignty over Western Sahara. The material before the Court appears to support the view that almost all the dahirs and other acts concerning caids relate to areas situated within present-day Morocco itself and do not in themselves provide evidence of effective display of Moroccan authority in Western Sahara. Nor can the information furnished by Morocco be said to provide convincing evidence of the imposition or levying of Moroccan taxes with respect to the territory. As to Sheikh Ma ul-'Aineen, the complexities of his career may leave doubts as to the precise nature of his relations with the Sultan, and different interpretations have been put upon them. The material before the Court, taken as a whole, does not suffice to convince it that the activities of this sheikh should be considered as having constituted a display of the Sultan's authority in Western Sahara at the time of its colonization.

104. Furthermore, the information before the Court appears to confirm that the expeditions of Sultan Hassan I to the south in 1882 and 1886 both had objects specifically directed to the Souss and the Noun and, in fact, did not go beyond the Noun; so that they did not reach even as far as the Dra'a, still less Western Sahara. Nor does the material furnished lead the Court to conclude that the alleged acts of resistance in Western Sahara to foreign penetration could be considered as acts of the Moroccan State. Similarly, the despatch of arms by the Sultan to Ma ul-'Aineen and others to encourage their resistance

to French penetration to the east of Western Sahara is, in any case, open to other interpretations than the display of the Sultan's authority. Again, although Morocco asserts that the Regheibat tribe always recognized the suzerainty of the Tekna confederation, and through them that of the Sultan himself, this assertion has not been supported by any convincing evidence. Moreover, both Spain and Mauritania insist that this tribe of marabout warriors was wholly independent.

105. Consequently, the information before the Court does not support Morocco's claim to have exercised territorial sovereignty over Western Sahara. On the other hand, it does not appear to exclude the possibility that the Sultan displayed authority over some of the tribes in Western Sahara. That this was so with regard to the Regheibat or other independent tribes living in the territory could clearly not be sustained. The position is different, however, with regard to the septs of the Tekna whose routes of migration are established as having included the territory of the Tekna caids within Morocco as well as parts of Western Sahara. True, the territory of the Tekna caids in the Noun and the Dra'a were Bled Siba at the relevant period and the subordination of the Tekna caids to the Sultan was sometimes uncertain. But the fact remains that the Noun and the Dra'a were recognized to be part of the Sherifian State and the Tekna caids to represent the authority of the Sultan. No doubt, as appears from previous paragraphs, the allegiance of the nomadic septs of the Tekna to the Tekna confederation has been in dispute in the present proceedings. The mere fact that those Tekna septs in their nomadic journeys spent periods of time within the territory of the caids of the Tekna confederation appears, however, to the Court to lend support to the view that they were subject, at least in some measure, to the authority of Tekna caids. The Court at the same time notes that Mauritania considers these Tekna septs to have been in "Moroccan fealty".

106. Furthermore, the material before the Court contains various indications of some projection of the Sultan's authority to certain Tekna tribes or septs nomadizing in Western Sahara. Such indications are, for example, to be found in certain documents relating to the recovery of shipwrecked seamen and other foreigners held captive by Teknas in Western Sahara; in documents showing that on some occasions, notably the Sultan's visits to the south in 1882 and 1886, he received the allegiance of certain nomadic tribes which came from Western Sahara for the purpose; and in letters from the Sultan to Tekna caids requesting the performance of certain acts to the south of the Noun and the Dra'a. Accordingly, and after taking due account of any contradictory indications, the Court considers that, taken as a whole, the information before it shows the display of some authority by the Sultan, through Tekna caids, over the Tekna septs nomadizing in Western Sahara.

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107. Thus, even taking account of the specific structure of the Sherifian State, the material so far examined does not establish any tie of territorial sovereignty between Western Sahara and that State. It does not show that Morocco displayed effective and exclusive State activity in Western Sahara. It does however provide indications that a legal tie of allegiance had existed at the relevant period between the Sultan and some, but only some, of the nomadic peoples of the territory.

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108. The Court must now examine whether its appreciation of the legal situation which appears from a study of the internal acts invoked by Morocco is affected to any extent by a consideration of the international acts said by it to show that the Sultan's sovereignty was directly or indirectly recognized as extending to the south of the Noun and the Dra'a. The material upon which it relies may conveniently be considered under four heads:

(a) A series of Moroccan treaties, and more especially a treaty with Spain of 1767, and treaties of 1836, 1856 and 1861 with the United States, Great Britain and Spain respectively, provisions of which deal with the rescue and safety of mariners shipwrecked on the coast of Wad Noun or its vicinity.

(b) A Moroccan treaty with Great Britain of 1895 in which Great Britain, it is claimed, recognized "the lands that are between Wad Draa and Cape Bojador, and which are called Terfaya above named, and all the lands behind it" as part of Morocco.

(c) Diplomatic correspondence concerning the implementation of Article 8 of the Treaty of Tetuan of 1860 and an alleged agreement with Spain of 1900 relating to the cession of Ifni, which are claimed to show Spanish recognition of Moroccan sovereignty as far southwards as Cape Bojador.

(d) A Franco-German exchange of letters of 1911 which expressed the understanding of the parties that "Morocco comprises all that part of northern Africa which is situated between Algeria, French West Africa, and the Spanish colony of Río de Oro".

109. The treaty provisions cited by Morocco begin with Article 18 of the Treaty of Marrakesh of 1767, the interpretation of which is in dispute between Morocco and Spain. This Article concerned a project of the Canary Islanders to set up a trading and fishing post on "the coasts of Wad Noun", according to Morocco, or "to the south of the River Noun", according to Spain, and the dispute is as to the scope of the Sultan's disavowal in Article 18 of any responsibility with respect to such a project. Morocco states that in the Arabic text the Article has the following meaning:

> "His Imperial Majesty warns the inhabitants of the Canaries against any fishing expedition to the coasts of Wad Noun and beyond. He disclaims any responsibility for the way they may be treated by the Arabs of the country, to whom it is difficult to apply decisions, since they have no fixed residence, travel as they wish and pitch their tents where they choose. The inhabitants of the Canaries are certain to be maltreated by those Arabs."

It contends, moreover, that this Arabic text is the only "official text" and should have preference also as being the more limited interpretation. On the basis of the Arabic text, it maintains that the Article signifies that the Sultan was recognized to have the power to take decisions with respect to the inhabitants of "Wad Noun and beyond", though it was difficult to apply his decisions to them.

110. Spain, however, stresses that the Spanish text of the treaty is also an original text, which is equally authentic and has the following meaning:

> "His Imperial Majesty refrains from expressing an opinion with regard to the trading post which His Catholic Majesty wishes to establish to the south of the River Noun, since he cannot take responsibility for accidents and misfortunes, because his domination *[sus dominios]* does not extend so far. ... Northwards from Santa Cruz, His Imperial Majesty grants to the Canary Islanders and the Spaniards the right of fishing without authorizing any other nation to do so."

It also disputes the meaning attributed by Morocco to the crucial words in the Arabic text and maintains that the meaning found in the Spanish text is confirmed by the wording of contemporary letters sent by the Sultan to King Carlos III, as well as other diplomatic material, and by a later Hispano-Moroccan treaty of 1799. Morocco, it should be interposed, in its turn questions the meaning given by Spain to certain words in the Arabic texts of the Sultan's letters and the 1767 treaty. Spain, however, on the basis of its interpretations of the various texts, contends that Article 18 of that treaty, far from evidencing Spanish recognition of the Sultan's sovereignty to the south of the Wad Noun, constitutes a disavowal by the Sultan himself of any pretensions to authority in that region.

111. The Court does not find it necessary to resolve the controversy regarding the text of Article 18 of this early treaty, because a number of later treaties, closer to the time of the colonization of Western Sahara and thus more pertinent in the present connection, contained clauses of a similar character, concerning mariners shipwrecked on coasts of the Wad Noun. It confines itself, therefore, to the following observations: In so far as this, or any other treaty provision, is relied upon by Morocco as showing international recognition by another State of Moroccan sovereignty, it would be difficult to consider such international recognition as established on the sole basis of a Moroccan text diverging materially from an authentic text of

the same treaty written in the language of the other State. In any event, the question of international recognition which Morocco claims to be raised by Article 18 of the Treaty of 1767 hinges upon the meaning to be given to such phrases as "Wad Noun and beyond" and "to the south of the River Noun", which is also a matter in dispute and calls for consideration in connection with the later treaties.

112. Article 18 of the 1767 treaty is indeed superseded for present purposes by provisions in Article 38 of the Hispano-Moroccan Treaty of Commerce and Navigation of 20 November 1861, which itself followed the model of similar provisions in treaties signed by Morocco with the United States in 1836 and with Great Britain in 1856. The relevant provisions of the 1861 treaty ran:

> "If a Spanish vessel of war or merchant ship get aground or be wrecked on any part of the coasts of Morocco, she shall be respected and assisted in every way, in conformity with the laws of friendship, and the said vessel and everything in her shall be taken care of and returned to her owners, or to the Spanish Consul-General... If a Spanish vessel be wrecked at Wad Noun or on any other part of its coast, the Sultan of Morocco shall make use of his authority to save and protect the master and crew until they return to their country, and the Spanish Consul-General, Consul, Vice-Consul, Consular Agent, or person appointed by them shall be allowed to collect every information they may require... The Governors in the service of the Sultan of Morocco shall likewise assist the Spanish Consul-General, Consul, Vice-Consul, Consular Agent or person appointed by them, in their investigations, according to the laws of friendship."

Morocco considers that these provisions, and similar provisions in other treaties, recognize the existence of Moroccan authorities in the Noun and Western Sahara, in the form of Governors in the service of the Sultan of Morocco, and also the effective possibilities of action by those Governors. It also argues that they recognize Moroccan sovereignty over Western Sahara because under Article 38 the Spanish authorities receive permission to enquire into the fate of shipwrecked mariners and derive that permission from the Sultan.

113. Morocco further considers that this view of the treaty provisions is confirmed by Spanish diplomatic documents relating to the recovery in 1863 of nine sailors from the Spanish vessel *Esmeralda* who had been captured, while fishing, by "Moors of the frontier coast". According to the documents, this incident occurred "more than 180 miles south of Cape Noun" and the Moors had demanded a ransom. The Spanish Minister of State had then instructed the Spanish Minister in Morocco to make the necessary request to the Sultan, pursuant to Article 38 of the 1861 treaty, "to use his powers to rescue the captive sailors". In due course the sailors were reported to have been freed and to be in the hands of Sheikh Beyrouk of the Noun; and the

Spanish Minister in Morocco was authorized to make a gift to the sheikh as a mark of gratitude.

114. Spain, on the other hand, claims that the origin of the shipwreck clauses was directly connected with the state of insubordination in the Souss and the Noun, and stresses that the treaties contained two systems of rescue and protection. One system, which it calls the general system, provided for areas where the Sultan did exercise his authority and undertook to use his normal powers to protect the shipwrecked. The other was a special régime for the Wad Noun. If a vessel were shipwrecked at the Wad Noun or beyond, the treaty provisions gave a different answer as to the duty of the Sultan. In that case, he did not "order" or "protect" but undertook to try to liberate the shipwrecked persons so far as he was able; and in order to do that he would use his influence with the peoples neighbouring on his realm and negotiate the ransoming of the sailors, usually with the local authorities. It was not, Spain considers, a matter of his exercising his own authority.

115. Spain also refers to various diplomatic documents relating to the recovery of sailors from a number of shipwrecked vessels as confirming the above interpretation of the clauses. Those documents, it states, show that in all those cases, including that of the *Esmeralda*, it was the intervention of the Beyrouk family, the sheikhs of the Wad Noun, which was decisive for the liberation of the captives, and that they negotiated directly with the Spanish Consul at Mogador. In one case, according to these documents, Sheikh Beyrouk informed the Spanish authorities that he had resisted the Sultan's efforts to wrest the prisoners from him and that their liberation had been achieved only when he himself had "negotiated the affair with the Spanish nation". According to Spain, this evidence indicates that to the north of Agadir the power of the Sultan was exercised and the Sultan could give orders; from Agadir to the south, in the Souss, the Noun and the Dra'a, the Sultan negotiated with local powers, he could not give orders; and this, Spain says, explains the cardinal role played by Sheikh Beyrouk in these matters.

116. Implicit in Morocco's claim that these treaties signify international recognition of the exercise of its sovereignty in Western Sahara is the proposition that phrases such as "the coasts of Wad Noun", "to the south of Wad Noun" or "Wad Noun and beyond" are apt to comprise Western Sahara. This proposition it advances on the basis that "Wad Noun" was a term used with two meanings: one narrow and restricted to the Wad Noun itself, the other wider and covering not only the Wad Noun but the Dra'a and the Sakiet El Hamra. This wider meaning, it indicates, was the one with which the term was used in Moroccan documents and treaties. Spain, on the other hand, maintains that no evidence has been adduced to demonstrate the use of the term Wad Noun with that special meaning, that there is no trace of it in the cartography of the period and that the testimony of travellers and explorers is conclusive as to the geographical separation of the Wad Noun country from

the Sakiet El Hamra. It is for Morocco to demonstrate convincingly the use of the term with that special meaning (cf. *Legal Status of Eastern Greenland, P.C.I.J., Series A/B, No. 53,* p. 49) and this demonstration, in the view of the Court, is lacking.

117. In the particular case of the *Esmeralda*; as the Court has already noted, Morocco points to documents showing a request by Spain to the Sultan in 1863 for the application of Article 38 of the Treaty of 1861 in respect of an incident which had occurred more than 180 miles to the south of Cape Noun. That incident may, therefore, be invoked as indicating Spain's recognition of the applicability of the treaty provision in relation to that part of the coast of Western Sahara. But those documents, especially when read together with further documents before the Court relating to the same incident, do not appear to warrant the conclusion that Spain thereby also recognized the Sultan's territorial sovereignty over that part of Western Sahara. The documents, and the whole incident, appear rather to confirm the view that Article 38, and other similar provisions, concerned, instead, the exercise of the personal authority or influence of the Sultan, through the Tekna caids of the Wad Noun, to negotiate the ransom of the shipwrecked sailors from the tribe holding them captive to the south of the Wad Noun. Clearly, Morocco is correct in saying that these provisions would have been pointless if the other State concerned had not considered the Sultan to be in a position to exercise some authority or influence over the people holding the sailors captive. But it is a quite different thing to maintain that those provisions implied international recognition by the other State concerned of the Sultan as territorial sovereign in Western Sahara.

118. Examination of the provisions discussed above shows therefore, in the view of the Court, that they cannot be considered as implying international recognition of the Sultan's territorial sovereignty in Western Sahara. It confirms that they are to be understood as concerned with the display of the Sultan's authority or influence in Western Sahara only in terms of ties of allegiance or of personal influence in respect of some of the nomadic tribes of the territory.

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119. The Anglo-Moroccan Agreement of 13 March 1895 is invoked by Morocco as evidencing specific international recognition by Great Britain that Moroccan territory reached as far south as Cape Bojador. This treaty concerned the purchase by the Sultan from the North-West African Company of the trading-station which had been set up at Cape Juby some years previously by agreements made between Mr. Donald Mackenzie and Sheikh Beyrouk. The treaty of 1895 provided *inter alia* that, if the Moroccan Government bought the trading-station from the company, "no one will have any claim to the lands that are between Wad Draa and Cape Bojador, and which are called Terfaya above named, and all the lands behind it, because all this belongs to the territory of Morocco". A further clause provided that the

Moroccan Government in turn undertook that "they will not give any part of the above-named lands to any-one whatsoever without the concurrence of the English Government". Morocco asks the Court to see these provisions as constituting express recognition by Great Britain of Moroccan sovereignty at the relevant period in all the land between the Wad Dra'a and Cape Bojador and the hinterland.

120. The difficulty with this interpretation of the 1895 treaty is that it is at variance with the facts as shown in the diplomatic correspondence surrounding the transaction concerning the Mackenzie trading-station. Numerous documents relating to this transaction and presented to the Court show that the position repeatedly taken by Great Britain was that Cape Juby was outside Moroccan territory, which in its view did not extend beyond the Dra'a. In the light of this material the provisions of the 1895 treaty invoked by Morocco appear to the Court to represent an agreement by Great Britain not to question in future any pretensions of the Sultan to the lands between the Dra'a and Cape Bojador, and not a recognition by Great Britain of previously existing Moroccan sovereignty over those lands. In short, what those provisions yielded to the Sultan was acceptance by Great Britain not of his existing sovereignty but of his interest in that area.

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121. Morocco also asks the Court to find indications of Spanish recognition of Moroccan sovereignty southwards as far as Cape Bojador in diplomatic material concerning the implementation of Article 8 of the Treaty of Tetuan of 1860 and an agreement of 1900 alleged to have been concluded with Spain in that connection. By Article 8 of the Treaty of Tetuan, the Sultan had agreed to concede to Spain "in perpetuity, on the coast of the Ocean, near Santa Cruz la Pequeña, the territory sufficient for the construction of a fisheries establishment, as Spain possessed in prior times". Morocco invokes a diplomatic Note of 19 October 1900 from the Spanish Ambassador in Brussels to the Belgian Foreign Minister, which referred to instructions having been given to the Spanish representative in Tangier "to negotiate an exchange between the port of Ifni and another port situated between Ifni and Cape Bojador as well as the cession of the city of Terfaya between the Dra'a and Cape Bojador . . .". In the same year a publication in Spain appeared to give some substance to the suggestion that as a result of those negotiations a protocol had been concluded in this connection.

122. Spain, however, denies altogether the existence of any such protocol, which, it argues, Morocco could not have failed to produce if it had been concluded; for Morocco itself would have been one of the parties to this alleged agreement. An examination of its archives, Spain states, shows that no agreement was concluded at the time of the mission, although the press published erroneous news on the subject at the time. Mauritania also voices strong doubts as to the existence of the alleged protocol. It further says:

"In the absence of direct evidence, and faced with second-hand references, which are geographically vague and general, it is difficult to express a view on the question, and in particular to draw any conclusions as to territorial recognitions by the Spanish Government."

123. The doubts raised by both Spain and Mauritania as to the alleged protocol of 1900 have not been dispelled by the material before the Court. The Court is not, therefore, able to take the possible existence of such a document into account.

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124. There remains the exchange of letters annexed to the Agreement between France and Germany of 4 November 1911, which Morocco presents as recognition by those Powers of Moroccan sovereignty over the Sakiet El Hamra. In Article 1 of the Agreement Germany undertook not to interfere with the action of France in Morocco. The exchange of letters then further provided that:

"Germany will not intervene in any special agreements which France and Spain may think fit to conclude with each other on the subject of Morocco, it being understood that Morocco comprises all that part of northern Africa which is situated between Algeria, French West Africa and the Spanish colony of Río de Oro."

It is on these last words that Morocco relies; and it maintains that, whatever construction is put upon the exchange of letters, those words mean that the agreement recognized that the Sakiet El Hamra belonged to Morocco. In support of this contention, it refers to certain diplomatic letters which are claimed to show that, when France and Germany drew up the exchange, they meant "to posit the principle that the Sakiet El Hamra was part of Moroccan territory".

125. Spain, on the other hand, points to Article 6 of the earlier Franco-Spanish Convention of 3 October 1904, which stated:

"... the Government of the French Republic acknowledges that Spain has henceforward full liberty of action in regard to the territory comprised between the 26° and 27° 40′ north latitude and the 11th meridian west of Paris, which are outside the limits of Morocco".

It further points to Article 2 of the Franco-Spanish Convention of 27 November 1912 as providing expressly that Article 6 of the 1904 Convention was to "remain effective". In those two Conventions, it observes, France clearly recognized that the Sakiet El Hamra was "outside the limits of Morocco". At the same time, it contests the view expressed by Morocco in the proceedings that these Conventions are not opposable to Morocco. It also draws attention to other diplomatic material relating to the 1911 exchange

of letters and claimed by it to show that this was concerned with Franco-German relations and not with the existing frontier of Morocco.

126. In the present connection, the Court emphasizes, the question at issue is not the Spanish position in the Sakiet El Hamra but the alleged recognition by other States of Moroccan sovereignty over the Sakiet El Hamra at the time of colonization by Spain. Accordingly the question of how far any of these agreements may or may not be opposable to any of the States concerned does not arise. The various international agreements referred to by Morocco and Spain are of concern to the Court only in so far as they may contain indications of such recognition. These agreements, in the opinion of the Court, are of limited value in this regard; for it was not their purpose either to recognize an existing sovereignty over a territory or to deny its existence. Their purpose, in their different contexts, was rather to recognize or reserve for one or both parties a "sphere of influence" as understood in the practice of that time. In other words, one party granted to the other freedom of action in certain defined areas, or promised non-interference in an area claimed by the other party. Such agreements were essentially contractual in character. This is why one party might be found acknowledging in 1904, vis-à-vis Spain, that the Sakiet El Hamra was "outside the limits of Morocco" in order to allow Spain full liberty of action in regard to that area, and yet employing a different geographical description of Morocco in 1911 in order to ensure the complete exclusion of Germany from that area.

127. In consequence, the Court finds difficulty in accepting the Franco-German exchange of letters of 1911 as constituting recognition of the limits of Morocco rather than of the sphere of France's political interests vis-à-vis Germany.

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128. Examination of the various elements adduced by Morocco in the present proceedings does not, therefore, appear to the Court to establish the international recognition by other States of Moroccan territorial sovereignty in Western Sahara at the time of the Spanish colonization. Some elements, however, more especially the material relating to the recovery of shipwrecked sailors, do provide indications of international recognition at the time of colonization of authority or influence of the Sultan, displayed through Tekna caids of the Noun, over some nomads in Western Sahara.

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129. The inferences to be drawn from the information before the Court concerning internal acts of Moroccan sovereignty and from that concerning international acts are, therefore, in accord in not providing indications of the existence, at the relevant period, of any legal tie of territorial sovereignty

between Western Sahara and the Moroccan State. At the same time, they are in accord in providing indications of a legal tie of allegiance between the Sultan and some, though only some, of the tribes of the territory, and in providing indications of some display of the Sultan's authority or influence with respect to those tribes. Before attempting, however, to formulate more precisely its conclusions as to the answer to be given to Question II in the case of Morocco, the Court must examine the situation in the territory at the time of colonization in relation to the Mauritanian entity. This is so because the "legal ties" invoked by Mauritania overlap with those invoked by Morocco.

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130. The Court will therefore now take up the question of what were the legal ties which existed between Western Sahara, at the time of its colonization by Spain, and the Mauritanian entity. As the very formulation of Question II implies, the position of the Islamic Republic of Mauritania in relation to Western Sahara at that date differs from that of Morocco for the reason that there was not then any Mauritanian State in existence. In the present proceedings Mauritania has expressly accepted that the "Mauritanian entity" did not then constitute a State; and also that the present statehood of Mauritania "is not retroactive". Consequently, it is clear that it is not legal ties of State sovereignty with which the Court is concerned in the case of the "Mauritanian entity" but other legal ties. It also follows that the first point for the Court's consideration is the legal nature of the "Mauritanian entity" with which Western Sahara is claimed by Mauritania to have had those legal ties at the time of colonization by Spain.

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131. The term "Mauritanian entity", as appears from the information before the Court, is a term first employed during the session of the General Assembly in 1974 at which resolution 3292 (XXIX) was adopted. This term, Mauritania maintains, was used by the General Assembly to denote the cultural, geographical and social entity which existed at the time in the region of Western Sahara and within which the Islamic Republic of Mauritania was later to be created. That such is the sense in which the term is used in Question II has not been disputed.

132. Explaining its concept of the Mauritanian entity at the time of the colonization of Western Sahara, Mauritania has stated:

(a) Geographically, the entity covered a vast region lying between, on the east, the meridian of Timbuktu and, on the west, the Atlantic, and bounded on the south by the Senegal river and on the north by the Wad

Sakiet El Hamra. In the eyes both of its own inhabitants and of the Arabo-Islamic communities, that region constituted a distinct entity.

(b) That entity was the Bilad Shinguitti, or Shinguitti country, which constituted a distinct human unit, characterized by a common language, way of life and religion. It had a uniform social structure, composed of three "orders": warrior tribes exercising political power; marabout tribes engaged in religious, teaching, cultural, judicial and economic activities; client-vassal tribes under the protection of a warrior or marabout tribe. A further characteristic of the Bilad Shinguitti was the much freer status of women than in neighbouring Islamic societies. The most significant feature of the Bilad Shinguitti was the importance given to the marabout tribes, who created a strong written cultural tradition in religious studies, education, literature and poetry; indeed, its fame in the Arab world derived from the reputation acquired by its scholars.

133. According to Mauritania, two types of political authority were found in the Bilad Shinguitti: the emirates and the tribal groups not formed into emirates. The major part of the Shinguitti country was composed of the four Emirates of the Trarza, the Brakna, the Tagant and the Adrar, where the town of Shinguit is situated. This town was both the centre of Shinguitti culture and a crossroads of the caravan trade, so that the Emirate of the Adrar became the pole of attraction for the important nomadic tribes of the Sahara. At the time of the Spanish colonization of Western Sahara, Mauritania maintains, the Emir of the Adrar was the principal political figure of the north and north-west Shinguitti country, and possessed "an influence extending from the Sakiet El Hamra to the Senegal". In this connection, it invokes the testimony of the Spanish explorer, Captain Cervera, who in 1886 concluded with the Emir at 'Ijil a treaty by which, had it been ratified, Spain would have been recognized as sovereign of the whole Adrar at-Tmarr. He had reported at the time that it was thanks to the Emir that several tribal chiefs were assembled at 'Ijil; that it was under the Emir's protection that the Spanish delegation had been able to attend the meeting safely; and that the parties to the two treaties concluded on that occasion included chiefs not only of tribes of the Adrar but also of tribes from west of the Emirate, i.e., from the territory of the Río de Oro.

134. In addition to the four emirates, Mauritania mentions a number of other tribal groups, not formed into emirates, which existed in Western Sahara at the time of its colonization by Spain. Among these it names as the main tribes the 'Aroussiyeen, Oulad Deleim, Oulad Bu-Sba', Ahil Barik-Allah and Regheibat. It maintains that all these tribes and the four emirates themselves were both autonomous and independent, not acknowledging any tie of political allegiance to the Sultan of Morocco. Their independence, it states, is shown by the numerous treaties which they signed with foreign Powers, and by the fact that "the emirs, sheikhs and other tribal

chiefs were never invested by outside authorities and always derived their powers from the special rules governing the devolution of power in the Shinguitti entity". Each emirate and tribal group was autonomously administered by its ruler, whose appointment and important acts were subject to the assent of the assembly of the Juma'a.

135. Mauritania recognizes that the emirates and the tribes were not under any common hierarchical structure. "In this respect", it has said:

> "... the Shinguitti entity could not be assimilated to a State, nor to a federation, nor even to a confederation, unless one saw fit to give that name to the tenuous political ties linking the various tribes".

Within the entity there were "great confederations of tribes, or emirates whose influence, in the form sometimes of vassalage and sometimes of alliance, extended far beyond their own frontiers". Even so, Mauritania recognizes that this is not a sufficient basis for saying that "the Shinguitti entity was endowed with international personality, or enjoyed any sovereignty as the word was understood at that time".

136. The Bilad Shinguitti, according to Mauritania, was a community having its own cohesion, its own special characteristics, and a common Saharan law concerning the use of water-holes, grazing lands and agricultural lands, the regulation of inter-tribal hostilities and the settlement of disputes. Within this community:

> "It was in reality the component entities which were endowed with the legal personalities or sovereignties, save in so far as these had been wholly or partly alienated, by ties of vassalage or alliance, to other such components. The sovereignty of the different component entities obviously derived from their practice";

each body, as master of a territory, ensured the protection of the territory and of its subjects against acts of war or pillage and, correspondingly, its ruler had the duty to safeguard outsiders who sought his protection. When the emirs or sheikhs formed alliances with or waged war on one another, it was a question of relations between equals. But the existence of the community became apparent when its independence was threatened, as is shown, in the view of Mauritania, by the concerted effort made by the tribes throughout the Shinguitti country to resist French penetration.

137. At the same time, Mauritania lays emphasis on the special characteristics of the Saharan area and the nomadic existence of many of the tribes which have already been referred to in this Opinion. Life in the arid areas of the Shinguitti country, it observes, required the continuous quest for suitable pastures and water-holes; and each tribe had a well-defined migration area with established migration routes determined by the location

of water-holes, burial grounds, cultivated areas and pastures. The colonial Powers, it further observes, in drawing frontiers took no account of these human factors and in particular of the tribal territories and migration routes, which were, as a result, bisected and even trisected by those artificial frontiers. Nevertheless, the tribes of necessity continued to make their traditional migrations, traversing the Shinguitti country comprised within the territory of the present-day Islamic Republic of Mauritania and Western Sahara. The same families and their properties were to be found on either side of the artificial frontier. Some wells, lands and burial grounds of the Río de Oro, for example, belonged to Mauritanian tribes, while watering places and palm oases in what is now part of the Islamic Republic were the properties of tribes of Western Sahara. These facts of life in the region, it points out, were recognized by France and Spain, which, in 1934, concluded an administrative agreement to prevent any obstacles to the nomadic existence of the tribes.

138. If it is thought necessary to have recourse to verbal classifications, Mauritania suggests that the concepts of "nation" and of "people" would be the most appropriate to explain the position of the Shinguitti people at the time of colonization; they would most nearly describe an entity which despite its political diversity bore the characteristics of an independent nation, a people formed of tribes, confederations and emirates jointly exercising co-sovereignty over the Shinguitti country.

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139. As to the legal ties between Western Sahara and the Mauritanian entity, the views of Mauritania are as follows: At the time of Spanish colonization, the Mauritanian entity extended from the Senegal river to the Wad Sakiet El Hamra. That being so, the part of the territories now under Spanish administration which lie "to the south of the Wad Sakiet El Hamra was an integral part of the Mauritanian entity". The legal relation between the part under Spanish administration and the Mauritanian entity was, therefore, "the simple one of inclusion". At that time, the Bilad Shinguitti was an entity united by historical, religious, linguistic, social, cultural and legal ties, and it formed a community having its own cohesion. The territories occupied by Spain, on the other hand, did not form an entity of their own and did not have any identity. The part to the south of the Wad Sakiet El Hamra was, legally speaking, part of the Mauritanian entity. That part and the present territory of the Islamic Republic of Mauritania together constitute "the indissociable parts of the Mauritanian entity".

140. In the light of the foregoing, Mauritania asks the Court to find that "at the time of colonization by Spain the part of the Sahara now under Spanish administration did have legal ties with the Mauritanian entity". At the same

time, it takes the position that where the Mauritanian entity ended the Kingdom of Morocco began. It also makes clear that the finding which it requests is limited to the part of Western Sahara to the south of the Sakiet El Hamra, subject to some overlapping between the legal ties of the Mauritanian entity and those of Morocco solely where they met, owing to the overlapping of the nomadic routes of their respective tribes.

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141. Spain considers that there are a number of obstacles in the way of accepting the views of the Islamic Republic. The Bilad Shinguitti or Shinguitti entity, it says, by no means coincides with what is called the Mauritanian entity. In its broadest sense, the Bilad Shinguitti is the area of an Islamaic culture, and it is a cultural and religious centre which had a certain influence up to the sixteenth century. Spain finds it impossible, however, to accept that a cultural phenomenon, limited in time and space, could be identical with an alleged entity of which the significance was mainly geographical and which had wider limits: Shinguit's religious and cultural influence and its fame in the Islamic world is not to be confused with the political hegemony of the Emirate of the Adrar which, when it came into being in the eighteenth century, included the town of Shinguit in its borders.

142. Again, in the view of Spain, the idea of an entity must express not only a belonging but also the idea that the component parts are homogeneous. The Mauritanian entity, however, is said to have been formed of heterogeneous components, some being mere tribes and others having a more complex degree of integration, such as an emirate. As to the Emirate of the Adrar, which is claimed to have been the nucleus of the Mauritanian entity, Spain maintains that it was a region distinct and independent from all those surrounding it, politically, socially and economically. Spain considers it to have constituted a centre of autonomous power distinct both from the other emirates in the south and from the independent nomad tribes in the north and west. Furthermore, at the period of colonization of Western Sahara, this emirate, according to Spain, was undergoing grave internal troubles and also being harassed by the neighbouring Emirates of the Trarza and the Tagant, and Spain describes the region as having then been in a state of anarchy.

143. Another difficulty, according to Spain, is that the concept of a Mauritanian entity is not accompanied by proof of any tie of allegiance between the tribes inhabiting the territory of Western Sahara and the Mauritanian tribes or between the tribes of the territory and the Emirate of the Adrar. Far from merging into or disappearing within the framework of the so-called Mauritanian entity, Spain maintains, the tribes of Western Sahara led their own life independently of the other Saharan tribes. In its view, there is an almost total lack of evidence which might give support to the Mauritanian argument over and above the mere sociological facts about nomadic life.

144. As to the agreements concluded by the independent tribes of the Sahara with Spanish explorers and with France, Spain considers those documents to run counter to the thesis that there was a "Mauritanian entity" in which tribes of Western Sahara were integrated. It regards the texts of the two treaties signed a 'Ijil on 12 July 1886, one with the independent tribes and the other with the Emir, as decisive on this point. The first was concluded with the tribes living in the area between the Atlantic and the western slopes of the Adrar, who ceded to Spain "all territories between the coast of the Spanish possessions of the Atlantic between Cape Bojador and Cabo Blanco and the western boundary of the Adrar"; the second treaty was concluded with the Emir and "recognizes Spanish sovereignty over the whole territory of the Adrar at-Tmarr". The existence of these two separate treaties, in Spain's view, evidences not only the total independence of those tribes and of the Emirate, but also their independence of each other; and it further proves that the Emir may have exerted influence but never political authority over those tribes. The independence of the tribes as between themselves is held by Spain to be also shown by the signature of the 1884 treaty by one tribe alone with the explorer Bonelli. Furthermore, other participants in this alleged entity, the Emirates of the Brakna, Trarza and Tagant and the tribes of the Hodh, signed with France a long series of treaties throughout the nineteenth century. Spain therefore finds it difficult to appreciate the coherence of the alleged Shinguitti entity.

145. Furthermore Spain rejects the proposition, bound up with the concept of the Mauritanian entity advanced by Mauritania, that the territory under Spanish administration did not itself form an entity or possess an identity of its own. It considers that what is the present territory of Western Sahara was the foundation of a Saharan people with its own well-defined character, made up of autonomous tribes, independent of any external authority; and that this people lived in a fairly well-defined area and had developed an organization and a system of life in common, on the basis of collective self-awareness and mutual solidarity. In Western Sahara, it says, a clear distinction was made by the population and in literature between their own country, the country of the nomads, and other neighbouring countries of a sedentary way of life, such as Shinguitti, Tishit and Timbuktu. The land of the settled people coincided to a large extent, in the north, with the historic frontiers of Morocco and, in the south, with the Emirate of the Adrar at-Tmarr. There was thus, according to Spain, a Sahrawi people at the time of colonization, coherent and distinct from the Mauritanian emirates; and this people in no way regarded itself as part of the Bilad Shinguitti or Mauritanian entity.

146. Another legal difficulty, according to Spain, is that the Islamic Republic could not be regarded as the direct successor to the alleged historical Mauritanian entity; for the notion of Mauritania was born in 1904 at a time when the territory of Western Sahara is said by Spain already to have had an existence well established in fact and in law.

147. On the basis of the foregoing considerations, Spain maintains that at the time of colonization by Spain there were no legal ties between the territory of Western Sahara and the Mauritanian entity.

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148. In the case concerning *Reparation for Injuries Suffered in the Service of the United Nations*, the Court observed: "The subjects of law in any legal system are not necessarily identical in their nature or in the extent of their rights, and their nature depends upon the needs of the community" (*I.C.J. Reports 1949*, p. 178). In examining the propositions of Mauritania regarding the legal nature of the Bilad Shinguitti or Mauritanian entity, the Court gives full weight both to that observation and to the special characteristics of the Saharan region and peoples with which the present proceedings are concerned. Some criterion has, however, to be employed to determine in any particular case whether what confronts the law is or is not legally an "entity". The Court, moreover, notes that in the *Reparation* case the criterion which it applied was to enquire whether the United Nations Organization – the entity involved – was in "such a position that it possesses, in regard to its Members, rights which it is entitled to ask them to respect" *(ibid.)*. In that Opinion, no doubt, the criterion was applied in a somewhat special context. Nevertheless, it expresses the essential test where a group, whether composed of States, of tribes or of individuals, is claimed to be a legal entity distinct from its members.

149. In the present case, the information before the Court discloses that, at the time of the Spanish colonization, there existed many ties of a racial, linguistic, religious, cultural and economic nature between various tribes and emirates whose peoples dwelt in the Saharan region which today is comprised within the Territory of Western Sahara and the Islamic Republic of Mauritania. It also discloses, however, the independence of the emirates and many of the tribes in relation to one another and, despite some forms of common activity, the absence among them of any common institutions or organs, even of a quite minimal character. Accordingly, the Court is unable to find that the information before it provides any basis for considering the emirates and tribes which existed in the region to have constituted, in another phrase used by the Court in the *Reparation* case, "an entity capable of availing itself of obligations incumbent upon its Members" *(ibid.)*. Whether the Mauritanian entity is described as the Bilad Shinguitti, or as the Shinguitti "nation", as Mauritania suggests, or as some form of league or association, the difficulty remains that it did not have the character of a personality or corporate entity distinct from the several emirates and tribes which composed it. The proposition, therefore, that the Bilad Shinguitti should be considered as having been a Mauritanian "entity" enjoying some form of sovereignty in Western Sahara is not one that can be sustained.

150. In the light of the above considerations, the Court must conclude that at the time of colonization by Spain there did not exist between the territory of Western Sahara and the Mauritanian entity any tie of sovereignty, or of allegiance of tribes, or of "simple inclusion" in the same legal entity.

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151. This conclusion does not, however, mean that the reply to Question II should necessarily be that at the time of colonization by Spain no legal ties at all existed between the territory of Western Sahara and the Mauritanian entity. The language employed by the General Assembly in Question II does not appear to the Court to confine the question exclusively to those legal ties which imply territorial sovereignty. On the contrary, the use of the expression "legal ties" in conjunction with "Mauritanian entity" indicates that Question II envisages the possibility of other ties of a legal character. To confine the question to ties of sovereignty would, moreover, be to ignore the special characteristics of the Saharan region and peoples to which reference has been made in paragraphs 87 and 88 above, and also to disregard the possible relevance of other legal ties to the various procedures concerned in the decolonization process.

152. The information before the Court makes it clear that the nomadism of the great majority of the peoples of Western Sahara at the time of its colonization gave rise to certain ties of a legal character between the tribes of the territory and those of neighbouring regions of the Bilad Shinguitti. The migration routes of almost all the nomadic tribes of Western Sahara, the Court was informed, crossed what were to become the colonial frontiers and traversed, *inter alia,* substantial areas of what is today the territory of the Islamic Republic of Mauritania. The tribes, in their migrations, had grazing pastures, cultivated lands, and wells or water-holes in both territories, and their burial grounds in one or other territory. These basic elements of the nomads' way of life, as stated earlier in this Opinion, were in some measure the subject of tribal rights, and their use was in general regulated by customs. Furthermore, the relations between all the tribes of the region in such matters as inter-tribal clashes and the settlement of disputes were also governed by a body of inter-tribal custom. Before the time of Western Sahara's colonization by Spain, those legal ties neither had nor could have any other source than the usages of the tribes themselves or Koranic law. Accordingly, although the Bilad Shinguitti has not been shown to have existed as a legal entity, the nomadic peoples of the Shinguitti country should, in the view of the Court, be considered as having in the relevant period possessed rights, including some rights relating to the lands through which they migrated. These rights, the Court concludes, constituted legal ties between the territory of Western Sahara and the "Mauritanian entity", this expression being taken to denote

the various tribes living in the territories of the Bilad Shinguitti which are now comprised within the Islamic Republic of Mauritania. They were ties which knew no frontier between the territories and were vital to the very maintenance of life in the region.

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153. In the oral proceedings, Morocco and Mauritania both laid stress on the overlapping character of the respective legal ties which they claim Western Sahara to have had with them at the time of colonization. Although the view of the Court as to the nature of those ties differs in important respects from those of the two States concerned, the Court is of the opinion that the overlapping character of the ties of the territory with Morocco and the "Mauritanian entity", as defined by the Court, calls for consideration in connection with Question II. This is because the overlapping character of the ties appears to the Court to be a significant element in appreciating their scope and implications.

154. The views of Morocco and Mauritania appear to have evolved considerably since their respective claims to special links with Western Sahara were first raised in the United Nations. It suffices, for the purposes of this Opinion, to note their views as finally formulated before the Court.

155. Morocco's views were explained as follows:

> "Morocco asserts the exercise of its sovereignty, but it does not deny, in so doing, that legal ties of another nature, no less essential having regard to the question put to the Court and to the forms of political life in the region concerned at the time of Spanish colonization, may be asserted by Mauritania.
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> . . . .
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> the sovereignty invoked by Morocco and the legal ties invoked by Mauritania were exercised on nomadic tribes and had their first impact on human beings. Of course, these human beings traced in their travels the outline of a territorial entity but, because of the very nature of the relationships between man and the land, some geographical overlappings were inevitable.
>
> When Morocco cites dahirs addressed to geographical destinations extending to Cabo Blanco, it is relying on documents attesting the allegiance of tribes finding themselves at given times at certain points in their nomadic itineraries. But it does not mean thereby to claim that, viewed from the standpoint of the destination of the dahir, the strongest link was not with the Mauritanian entity.

Conversely, Morocco does not consider that geographical reference by Mauritania to the outer limits of the nomadic itineraries of Mauritanian tribes rules out the predominance of Moroccan sovereignty in those areas.

In short, there is a north and there is a south which juxtapose in space the legal ties of Western Sahara with Morocco and with Mauritania."

Amplifying this explanation, Morocco said:

"... when Morocco refers to Cabo Blanco and Villa Cisneros in stating arguments of a general character, it is not intending thereby to maintain that its sovereignty extended over those regions at the time of the Spanish colonization; for at the period under consideration those regions were an integral part of the Mauritanian entity, to which the Islamic Republic of Mauritania is the sole successor."

156. The views of Mauritania were explained as follows:

"... the Governments of the Islamic Republic of Mauritania and of the Kingdom of Morocco recognize that there is a north appertaining to Morocco, a south appertaining to Mauritania and that there are some overlappings as a result of the intersection of the nomadic routes from the north and from the south. As a result, therefore, there is no no-man's land between the influence of Morocco and that of the Mauritanian entity ..."

"The areas of overlap which have been referred to before the Court implied the superimposition of the Mauritanian entity, the Shinguitti entity, and the Kingdom of Morocco, solely where they met.

Thus the mention of Cabo Blanco and Villa Cisneros by Morocco cannot signify that those regions were, at the time of colonization, under Moroccan sovereignty, as was conceded ... on 25 July ... Similarly, the fact that there may have been this or that Mauritanian nomadic migration in the region of the Sakiet El Hamra cannot be regarded as implying any dispute as to the fact that that region appertains to the Kingdom of Morocco, which, in the view of the Mauritanian Government, did not end at the limits of the Makhzen."

157. It has to be added that Morocco and Mauritania both emphasized that, in their view, the overlapping left "no geographical void" – no "no-man's land" – between their respective ties with Western Sahara.

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158. The Court, as has already been indicated, concurs in the view that Question II does not envisage any form of territorial delimitation by the

Court. It is also evident that the conclusions reached by the Court concerning the ties which existed between Western Sahara and the Kingdom of Morocco or the Mauritanian entity, as defined above, at the time of colonization lead also to the conclusion that there was a certain overlapping of those ties. The findings of the Court, however, regarding the nature of the legal ties of the territory respectively with the Kingdom of Morocco and the Mauritanian entity differ materially from the views advanced in that respect by Morocco and Mauritania. In the opinion of the Court those ties did not involve territorial sovereignty or co-sovereignty or territorial inclusion in a legal entity. In consequence, the "geographical overlapping" drawn attention to by the two States had, in the Court's view, a different character from that envisaged in the statements quoted above.

159. The overlapping arose simply from the geographical locations of the migration routes of the nomadic tribes; and the intersection and overlapping of those routes was a crucial element in the complex situation found in Western Sahara at that time. To speak of a "north" and a "south" and an overlapping with no void in between does not, therefore, reflect the true complexity of that situation. This complexity was, indeed, increased by the independence of some of the nomads, notably the Regheibat, a tribe prominent in Western Sahara. The Regheibat, although they may have had links with the tribes of the Bilad Shinguitti, were essentially an autonomous and independent people in the region with which these proceedings are concerned. Nor is the complexity of the legal relations of Western Sahara with the neighbouring territories at that time fully described unless mention is made of the fact that the nomadic routes of certain tribes passed also within areas of what is present-day Algeria.

160. In the view of the Court, therefore, the significance of the geographical overlapping is not that it indicates a "north" and a "south" without a "no-man's land". Its significance is rather that it indicates the difficulty of disentangling the various relationships existing in the Western Sahara region at the time of colonization by Spain.

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161. As already indicated in paragraph 70 of this Opinion, the General Assembly has made it clear, in resolution 3292 (XXIX), that the right of the population of Western Sahara to self-determination is not prejudiced or affected by the present request for an advisory opinion, nor by any other provision contained in that resolution. It is also clear that, when the General Assembly asks in Question II what were the legal ties between the territory of Western Sahara and the Kingdom of Morocco and the Mauritanian entity, it is addressing an enquiry to the Court as to the nature of these legal ties. This question, as stated in paragraph 85 above, must be understood as referring to

such legal ties as may affect the policy to be followed in the decolonization of Western Sahara. In framing its answer, the Court cannot be unmindful of the purpose for which its opinion is sought. Its answer is requested in order to assist the General Assembly to determine its future decolonization policy and in particular to pronounce on the claims of Morocco and Mauritania to have had legal ties with Western Sahara involving the territorial integrity of their respective countries.

162. The materials and information presented to the Court show the existence, at the time of Spanish colonization, of legal ties of allegiance between the Sultan of Morocco and some of the tribes living in the territory of Western Sahara. They equally show the existence of rights, including some rights relating to the land, which constituted legal ties between the Mauritanian entity, as understood by the Court, and the territory of Western Sahara. On the other hand, the Court's conclusion is that the materials and information presented to it do not establish any tie of territorial sovereignty between the territory of Western Sahara and the Kingdom of Morocco or the Mauritanian entity. Thus the Court has not found legal ties of such a nature as might affect the application of resolution 1514 (XV) in the decolonization of Western Sahara and, in particular, of the principle of self-determination through the free and genuine expression of the will of the peoples of the Territory (cf. paragraphs 54-59 above).

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163. For these reasons,

THE COURT DECIDES,

with regard to Question I,

by 13 votes to 3,

and with regard to Question II,

by 14 votes to 2,

to comply with the request for an advisory opinion;

THE COURT IS OF OPINION,

with regard to Question I,

unanimously,

that Western Sahara (Río de Oro and Sakiet El Hamra) at the time of colonization by Spain was not a territory belonging to no-one *(terra nullius)*;

with regard to Question II,

by 14 votes to 2,

that there were legal ties between this territory and the Kingdom of Morocco of the kinds indicated in paragraph 162 of this Opinion;

by 15 votes to 1,

that there were legal ties between this territory and the Mauritanian entity of the kinds indicated in paragraph 162 of this Opinion.

Done in French and English, the French text being authoritative, at the Peace Palace, The Hague, this sixteenth day of October, one thousand nine hundred and seventy-five, in two copies, of which one will be placed in the archives of the Court and the other transmitted to the Secretary-General of the United Nations.

(Signed) Manfred LACHS,
President.

(Signed) S. AQUARONE,
Registrar.

Judge GROS makes the following declaration:

[Translation]

The request for advisory opinion, as I understand it, puts to the Court a precise question, relating to a certain legal controversy, to which the Advisory Opinion gives a complex reply; I was in agreement with the Court only in respect of one part of that reply, which I would have preferred to separate from the rest of the operative part of the Opinion. My analysis of the facts of the case and the rules of interpretation which should be applied to them differs from the observations made by the Court, and I consider it necessary to give a brief account of the reasons for my approach to the problems raised by examination of the General Assembly's request, the object of which appears to me to be more limited than that adopted in the Advisory Opinion.

1. In every case, whether contentious or advisory, the first question which arises for a court is: What is being asked for? In the present case, right from

the beginning of the proceedings it was apparent that the General Assembly was asking the Court to give it an opinion on a precise legal question, defined as springing from a "legal controversy [which] arose" during the discussion "over the status of the said Territory at the time of its colonization by Spain"; in the documentation supplied by the Secretary-General concerning the period 1958-1974 there is no trace of any specific legal question between Morocco and Spain, which however the present Advisory Opinion has described as a "legal dispute ... regarding the Territory" (Order of 22 May 1975 and para. 9 of the Opinion). I therefore voted against the Order of 22 May, which, while it was devoted to the composition of the Court, inevitably settled the question of the legal nature of the Opinion, as had already happened in 1971 (*Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), I.C.J. Reports 1971*, pp. 16 ff.). The problem I will deal with first is that of the definition of the object of the present request for opinion, apart from the consequences of the Order on the composition of the Court (cf. on this point para. 7 below). I consider that there is no dispute—since that is the word used by the Court—between Morocco and Spain, but a legal question raised by the Government of Morocco before the General Assembly, with the support of the Mauritanian Government only in 1974, which may be analysed as a multilateral legal controversy in a debate on the future status of the territory of Western Sahara (hereinafter referred to as the Territory). The subject of that legal question is as follows: is Morocco entitled to claim reintegration of the Territory into the national territory of the Kingdom of Morocco, to which it belonged, according to Morocco, at the time of colonization by Spain? Such is therefore the precise legal question, and the sole question, to be answered by the Court; I therefore regard the reasoning of the Advisory Opinion on other subjects as unrelated to the object of the request.

2. There is no need to dwell at length on the nature of the alleged dispute between two States on such a question. The Court should examine the titles of the Sherifian Empire prior to the time of colonization by Spain, even though the date of 1884 were not a rigid date. Proof of the sovereignty of the Sherifian Empire is necessarily a proof prior to the action of the Government of Spain, and independent thereof; since the claim was based on the detachment of part of the territory of the Empire, it entails the need to prove prior appurtenance to the territory of a State which was then recognized by the community of States. Spain may of course have been one witness, among others, of the situation, but it cannot be a party to a bilateral legal dispute which "continued to subsist" (para. 36 of the Opinion) with the Kingdom of Morocco over facts and a legal situation existing 90 years ago. For a dispute really to exist between two States, it is necessary, as Judge Morelli, and subsequently Judge Sir Gerald Fitzmaurice, have explained, in the *Northern Cameroons* case (*I.C.J. Reports 1963*, p. 109), and subsequently the case of the Advisory Opinion of 21 June 1971 (*I.C.J. Reports 1971*, p. 314), that:

> "... the one party [or parties] should be making, or should have made, a complaint, claim or protest about an act, omission or course of conduct, present or past of the other party, which the latter refutes, rejects or denies the validity of, either expressly, or else implicitly by persisting in the acts, omissions or conduct complained of, or by failing to take the action or make the reparation, demanded".

It is not enough that two States may have different or even opposing views as to an event or situation for there to be a contentious case, and the end of the passage quoted makes this clear: if it is not possible for any satisfaction for the claim of the one State to be obtained from the other, there is no dispute between them. Now what response could the Government of Spain make to a claim of the Government of Morocco concerning the right of reintegration of the Territory into the Kingdom of Morocco, when these two Governments have specifically agreed to effect the decolonization of the Territory by a procedure set in motion within the United Nations, except to reply that it had no competence to settle by itself this problem which the two Governments, along with many others, are debating in various United Nations bodies. Even if the Government of Spain had agreed to support the claim of the Government of Morocco, such an attitude would have been without any legal effect in the international sphere. The two Governments have explicitly chosen decolonization in the context of the United Nations, in order to study and ultimately settle the future of the Territory, with the other Members of the United Nations. There is no bilateral dispute which is detachable from the United Nations debate on the decolonization; there is no bilateral dispute at all, nor has there ever been any such dispute.

3. In the Advisory Opinion the Court has not re-used the expression "legal dispute ... regarding the Territory" between the Governments of Morocco and Spain, used in the Order of 22 May; paragraphs 34 to 41 slightly modify the analysis, and refer to a legal controversy which arose not in bilateral relations but during the proceedings of the General Assembly, and in relation to matters with which it was dealing. But the ground of the Order of 22 May was an alleged bilateral dispute, since a judge *ad hoc* was accepted for Morocco and refused for Mauritania. Despite the stylistic development in the Opinion, the reasoning is still that a legal controversy continued to subsist between Morocco and Spain, and this is, it seems to me, not maintainable for the reasons of substance which I have briefly outlined. It is also not maintainable in the light of the history of how the alleged dispute took concrete shape. When examining the documents submitted, the Court has correctly noted that between 1958 and 1974 the controversy had several aspects. Between 1966 and 1974 it so far faded away that it was left aside by the claimant State, apart from reservations intended to prevent it being argued that its legal contention had been abandoned. Prior to 1966, however, the opposition of views between Morocco and Spain never got beyond the stage of bilateral diplomatic conversations, or discussions of principle in the United

Nations; the dossier before the Court does not contain a single trace of a negotiation which might appear to be a preliminary to the crystallization of a bilateral dispute. After having tried the way of negotiation with Spain in order to obtain solutions the nature of which the dossier does not make clear, the Government of Morocco stated on 7 June 1966 that it would choose another way, that of "the liberation and independence of the Moroccan people of so-called Spanish Sahara . . . in the conviction that unity could be achieved only through liberation and independence. . ." (A/AC.109/SR.436, p. 8). The alleged dispute had not crystallized up to that time, and in subsequent debates it was not until the 1974 session of the General Assembly that, according to the Court, it "reappeared".

4. In connection with the Advisory Opinion of 21 June 1971 (*I.C.J. Reports 1971*, pp. 329-330), I have enquired into the elements for solution of the problem posed by the parallel existence of a dispute between two or more States and of a situation of which the political organ of the United Nations was seised, and I then took the view that the fact that a general situation was being dealt with within the United Nations could not bring about the disappearance of the element of a dispute between States if there existed such an element, and that in each case the first question was whether one is or is not confronted with what is really a dispute. I do not see that in the present case there is any dispute between Morocco and Spain; there cannot be a dispute over a legal issue which neither of the States can resolve by themselves. The disagreement in all the United Nations debates concerns a problem any solution of which is meaningless unless it is valid *erga omnes*; in the present case there is no bilateral dispute which can be detached from the general discussion of the claim of the Government of Morocco to re-integration of the Territory, but what is detachable from the general discussion is a point of law of general interest on which the General Assembly considers itself insufficiently informed, and which it asks the Court to settle in order to be able to continue its examination of the decolonization of the Territory. This point may of course be of more particular interest to certain member States, and that is the reason why they are mentioned in resolution 3292 (XXIX), but these States are not making specific claims against each other, and there is no dispute.

5. Apart from the important legal interest of principle involved in the discussion of the point, the principal consequence of the difference between the alleged bilateral dispute and a legal question falling within the advisory competence of the Court has been an erroneous decison taken as to the composition of the Court, and further the fact that the presentation of the Advisory Opinion is a precise transposition of what is customary in contentious proceedings. I find it regrettable that the Court should in the Opinion have confirmed the view provisionally taken in the Order of 22 May, and—associating myself with the reservations of other Members of the Court—I maintain that that analysis did not take account of the necessary conditions for the existence of real disputes to be recognized. This is all the more so in that, by conceding in the advisory opinion that the subject of its

examination depended on the interpretation of the decolonization action of the Territory, the Court in effect abandoned the view that there was a bilateral opposition between Morocco and Spain as to the re-integration of the Territory into the Kingdom of Morocco.

6. The question whether, within the decolonization process of Western Sahara commenced by the United Nations, one or two States can invoke a right to re-integration of the Territory so as to come under their sovereignty is a legal question within the meaning of Article 65 of the Statute of the Court, and it is proper to give a reply thereto. But the definition of legal questions within the meaning of Article 65, as formulated in a general way in paragraphs 18 and 19 of the Advisory Opinion, seems to me dangerously inaccurate. I shall merely recall that when the Court gives an advisory opinion on a question of law it states the law. The absence of binding force does not transform the judicial operation into a legal consultation, which may be made use of or not according to choice. The advisory opinion determines the law applicable to the question put; it is possible for the body which sought the opinion not to follow it in its action, but that body is aware that no position adopted contrary to the Court's pronouncement will have any effectiveness whatsoever in the legal sphere. In the present case, as defined in the Advisory Opinion, this point is no longer in doubt; since the question put has been found to be a legal one, and since a reply could be regarded as capable of influencing the United Nations action of decolonization of the Territory, the Court could exercise its function as a judicial organ on such a question in the normal way, unlike the case contemplated in 1963 when it stated that: "it is not the function of a Court merely to provide a basis for political action if no question of *actual legal rights* is involved" (*I.C.J. Reports 1963*, p. 37, emphasis added). The Court's reply concerns a claim of right to re-integration of the Territory at the present time, and the fact that the first test of that right was that of the titles prior to colonization does not make such a question abstract or academic. That is not so with regard to the other part of the reply which the Court has given in paragraph 162 of the Opinion, as we shall see in paragraphs 10 and 12 of these observations; it is the application of this theory, which gives an extensive meaning to Article 65 of the Statute, to the operative part of the Opinion which shows how improper it is.

7. To conclude on this aspect of the problems of competence which have arisen for the Court, I shall merely observe that once again the commitments entered into in an Order on a preliminary question have tied the Court's hands. The recitals in the Order of 22 May 1975 were based on the "appearance" of a dispute between Morocco and Spain and of a request on a legal question pending between two or more States within the meaning of Article 89 of the Rules; the verb "appear" is used four times. The Court however then went on to say that its conclusions did not prejudge its position on any of the questions subsequently to be decided, competence, propriety of replying to the request, merits. Despite the effective disappearance of the bilateral dispute in the Court's train of reasoning in its Opinion, and the veil

drawn over the existence of a legal question pending between States, the Court has been unable or unwilling to modify what it said in May 1975, although the reason for the appointment of a judge *ad hoc* does not stand. The third recital in the Order states that the Court "includes upon the Bench a judge of the nationality of Spain, the administering Power of Western Sahara"; I have pointed out in paragraphs 2 and 4 above that Spain was not, on the basis of that or any other status, a party to a bilateral dispute, or to the settlement of a legal question pending between two or more States. By deciding that the question put to the Court was linked to the pursuit of the General Assembly's decolonization process, the Court impliedly admits that the justification for its competence is no longer the dispute which there "appeared" to be in May 1975. Judge Sir Gerald Fitzmaurice and I commented in 1971 on the regrettable effects of these Orders on the composition of the Court which irrevocably prejudge the merits (*I.C.J. Reports 1971*, p. 316, pp. 325-326 and 330). I should add, in the present case, that the Court allowed one of its Members to sit although he had in the United Nations committed himself on one element in the discussion (on this point cf. *I.C.J. Reports 1971*, the dissenting opinion of Sir Gerald Fitzmaurice, p. 309, and my own observations on pp. 311 ff.).

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8. My observations on the problems raised by the Government of Mauritania essentially do not differ from those of the Court; I would however observe that the legal position of the Government of Mauritania in the proceedings before the Court was peculiar, inasmuch as prior to 1974 it did not seek to set up its claim for reintegration of the Territory into its national territory against the normal pursuit of the procedure for self-determination of the population of the Territory in the United Nations context.

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9. The above considerations as to the proper interpretation of Article 65 of the Statute and the precise object of the request for advisory opinion enable me to be brief in explaining my negative vote as to the propriety of replying to the first question in the request. Since the Court decided to reply to this question in the very terms in which it has been put, I took the view that the question was not a legal one, that it was purely academic and served no useful purpose, and I share the views of Judge Dillard as to its being a "loaded" one. The Advisory Opinion rightly recognizes that the concept of *terra nullius* was never relied on by any of the States interested in the status of the Territory at the time of colonization; no treaty or diplomatic document has been produced relying on this concept in connection with Western Sahara, and States at the time spoke only of zones of influence. With regard to a territory

in respect of which the concept makes no appearance in the practice of States, it is a sterile exercise to ask the Court to pronounce on a hypothetical situation; it is not for a court to enquire into what would have happened in 1884 if States had relied on this concept, but into what did happen. If the real question put by the General Assembly, in the thinking of those who drafted it, was what was the legal status of the Territory under international law at the time, it duplicated the second question, to which the Court has, almost unanimously, agreed to reply.

Having said that, since the Court has decided to give a reply to the first question, and since our rules do not permit an abstention, I have voted with all my colleagues that the Territory was not *nullius* before colonization; for I consider that the independent tribes travelling over the territory, or stopping in certain places, exercised a *de facto* authority which was sufficiently recognized for there to have been no *terra nullius*.

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10. The Court has not adopted the simplest way of giving its reply to the second question, since the reply itself, inasmuch as it is effected by cross-reference to paragraph 162 of the reasoning, is enigmatic, as is the paragraph referred to, in which a positive finding of what are said to be legal ties of allegiance between certain nomadic tribes of the territory and the Emperor of Morocco at the time of colonization, and also other ties which are said to be legal, this time between the Mauritanian entity and the Territory, is combined with a negative decision as to the existence of any tie of sovereignty over the territory on the part of the Emperor of Morocco or the Mauritanian entity, the conclusion being that no legal tie exists which could influence the principle of self-determination through the free and genuine expression of the will of the peoples of the Territory (with a fresh cross-reference here to paras. 54-59 of the opinion).

The second part of paragraph 162, concerning the question of territorial sovereignty, is the only one which corresponds to the question put in the request for opinion. The object of the request, as I said in my very first paragraph above, was to obtain the opinion of the Court on a claim of the Government of Morocco to the reintegration of the Territory in the national territory of Morocco, and on a parallel claim by the Government of Mauritania based on the concept of the Mauritanian entity at the time in question, which advisory opinion was necessary prior to pursuit of the decolonization of the territory. I agree with the views and decision of the Court on this point of law.

On the other hand, if paragraph 162 had been divided into two, I would have voted against the first part which relates to the "legal ties" other than the tie of territorial sovereignty, because those ties are not legal ties but ethnic, religious or cultural ties, ties of contact of a civilization with what lies on its periphery and outside it, and which do not touch on its own nature. I must

therefore make a few observations on the part of the Court's reply with which I disagree, both as regards the reasoning and the conclusion (for Morocco, paras. 105, 106, 107, 129; for Mauritania, paras. 151 and 152; for the conclusion, para. 162).

11. The description given in the Opinion of the Saharan desert and of nomadic life in 1884 is an idyllic vision of what was a harsh reality. At the time, the Saharan desert was still the frontierless sea of sand used by the caravans as convoys use an ocean, for the purposes of a well-known trade; the desert was a way of access to markets on its periphery. The relation between the territory and human beings was affected by these aspects, and the organization of the populations of the desert reflects these special conditions of life: caravans, the quest for pastures, oases, defence or conquest, protection and submission between tribes – with regard to which testimony produced to the Court, and not disputed, was to the effect that in modern times there are 173 Moorish tribes. Since the Court was unable to carry out any specific research, it is vain to make generalizations, in the absence of any reliable data, on the lines that there was "allegiance" between the Emperor of Morocco and "some" of the nomadic tribes, or "some rights relating to the land", between the Territory and the Mauritanian entity, when the Court would be quite unable to say either what were the tribes concerned in 1884, to what extent and for what period, nor in what effective exercise of rights relating to the land the tribes and the Mauritanian entity were combined, nor what tribes, nor for what period. It is the duty of a court to establish facts, that is to say to make findings as to their existence, and it confers a legal meaning upon them by its decision; a court may neither suppose the existence of facts nor deduce them from hypotheses unsupported by evidence. How can one speak of a legal tie of allegiance, a concept of feudal law in an extremely hierarchical society, in which allegiance was an obligation which was assumed formally and publicly, which was known to all, was relied on on both sides, and was backed by specific procedures and not merely by the force of arms. The political situation, in the broadest sense of the term, of the tribes of the desert is that of independence asserted by arms, independence both between the tribes themselves and with regard to what lay on the periphery of their travelling grounds. To give the term allegiance its traditional sense, more would have to be said than that it was possible that the Sultan displayed some authority over some unidentified tribes of the desert (para. 105 of the Opinion). As to the observations and deductions made as to the role of the various Tekna tribes, also unidentified, these seem to me injudicious, mere *a posteriori* constructions of a little known epoch. On the basis of the dossier as it stands, and of the studies of this period by geographers, historians, explorers and soldiers, the Saharan desert and its tribes did not recognize allegiance in the legal sense of the word, and sporadic contacts or relationships with the outside world did not affect the peculiarity and exclusivity of their way of life. If the desert is a separate world, it is an autonomous world in the conception of its relationships with those who have a different way of life.

12. Contact-relationships of which the duration is unknown, and the existence of which at the period of colonization is supposed rather than proved, do not afford possible material for the Court to examine and on which to reply, and by doing so it oversteps the limits of the powers conferred upon it by Article 65 of its Statute (cf. para. 6 above). By means of the extensive interpretation given to Article 65, whereby the Court was led to put to itself a second question, that of the legal ties other than sovereignty over the Territory at the period under consideration, which was the sole subject of the controversy which gave rise to the request for opinion, the Court purports to be replying to a legal question, but the ties which it describes as legal would only be so if, after having established their existence, the Court could in any way, by determining their significance, produce an effect on the decolonization of the Territory. The Court cannot attribute a legal nature to facts which do not intrinsically possess it; a court does not create the law, it establishes it. If there is no rule of law making it possible for it to assert the existence of the alleged legal ties, the Court oversteps its role as a judicial organ by describing them as legal, and its finding is not a legal finding; the Court's statement in paragraph 73 of the Opinion that questions put in a request for opinion must have "a practical and contemporary effect" if they are not to be "devoid of object or purpose", does not suffice, for the Court does not in this field have capacity to "give advice" to the General Assembly which would have a practical effect. Whether such factors existed in 1884 or not – which has not been "established" in the judicial sense of the word – the General Assembly would be free to take them into account together with other contemporary factors, which also do not fall within the Court's competence, because economics, sociology and human geography are not law. In 1962 the Court said: "in accordance with Article 65 of its Statute, the Court can give an advisory opinion only on a legal question. If a question is not a legal one, the Court has no discretion in the matter" (Advisory Opinion of 20 July 1962, *Certain Expenses of the United Nations (Article 17, paragraph 2, of the Charter), I.C.J. Reports 1962*, p. 155).

13. I expressed my view in 1974 as to the current trend in the Court to reply to problems which it raises itself rather than to that which is submitted to it, and can only endorse what I said then (*I.C.J. Reports 1974*, pp. 148-149). In the present case, the way in which the operative part of the Advisory Opinion has been drawn has obliged me to vote in a way as unsatisfactory as that drafting itself, as is shown by the various opinions in relation to the apparent quasi-unanimity. Like other Members of the Court, I was faced only with the choice between agreeing or disagreeing subject in either event to reservations. I voted in favour of the adoption of the operative clause, and thus of paragraph 162, because of the part thereof concerning the object of the request, as I have defined it above, that is to say verification of the existence of legal ties of appurtenance or dependence of the population of the Territory, at the period under consideration, vis-à-vis an external political authority – in short, ties relating to the sovereignty which was claimed before the Court; and the role of the Court went no further than that.

Judge IGNACIO-PINTO makes the following declaration:

[Translation]

I have been able to subscribe only in part to the Opinion of the International Court of Justice dated 16 October 1975 and only because in the final paragraph of its reasoning, paragraph 162, the Court's

> ". . . conclusion is that the materials and information presented to it do not establish any tie of territorial sovereignty between the territory of Western Sahara and the Kingdom of Morocco or the Mauritanian entity. Thus the Court has not found legal ties of such a nature as might affect the application of resolution 1514 (XV) in the decolonization of Western Sahara and, in particular, of the principle of self-determination through the free and genuine expression of the will of the peoples of the Territory."

I consequently reject all that part of the Court's statement which declares that at the time of colonization by Spain there were legal ties of allegiance between the Sultan of Morocco and certain tribes of the territory at the same time as other legal ties between the Mauritanian entity and the territory of Western Sahara.

My objection to the Advisory Opinion is due to the fact that I consider that, even if it appears that the Court is justified in declaring itself competent under the provisions of Article 96 of the Charter of the United Nations on the one hand, and of Article 65 of the Statute of the Court on the other, to receive from the United Nations General Assembly the request for an advisory opinion, it would have been proper by reason of certain circumstances in the case *ab initio* for the Court, availing itself of its discretionary power, and after having declared the request receivable as to the form, to reject it as to the substance, because the questions as put are, as it were, loaded questions, leading in any case to the answer awaited in this particular instance, namely the recognition of rights of sovereignty of Morocco on the one hand and of Mauritania on the other over some part or other of Western Sahara.

For the sake of brevity and to avoid useless repetition, I can support the observations of Judge Petrén concerning the interpretation of paragraph 162 of the Opinion and the grounds on which my colleague, like myself, rejects all of that paragraph other than where it deals with the question of any tie of territorial sovereignty between the territory and Morocco and the Mauritanian entity – a part of the paragraph which I can accept.

M. NAGENDRA SINGH, juge, fait la déclaration suivante:

[Traduction]

Bien que je souscrive à l'avis consultatif et que j'approuve son insistance sur la nécessité d'une expression authentique de la volonté des populations,

fondement de l'autodétermination, il n'est peut-être pas inutile de chercher à mieux cerner la nature et le caractère des liens juridiques qui constituent l'objet de la question II de la résolution 3292 (XXIX) de l'Assemblée générale, par laquelle la Cour a été saisie de la présente requête pour avis consultatif. Sans paraître sortir de son rôle judiciaire, un tribunal peut préciser l'effet de ces liens sur la décolonisation, qui demeure le but et le thème essentiel des travaux en cours à l'Assemblée générale. C'est là un aspect vital qui doit être énoncé en détail et sans équivoque afin d'éclairer l'Assemblée générale.

En outre, d'autres aspects, peut-être tout aussi importants, méritent de retenir l'attention et doivent être soulignés comme il convient pour que la portée de l'avis consultatif soit pleinement appréciée. Ces aspects essentiels à mes yeux sont brièvement indiqués ci-dessous.

I

Le Maroc et la Mauritanie ont évoqué l'un et l'autre certains aspects et détails pertinents du processus de décolonisation qu'il importe de relever ici. Dans son exposé oral, l'un des conseils du Maroc s'est exprimé en ces termes:

> « D'ailleurs, même dans l'hypothèse où l'Assemblée générale déciderait que, pour la mise en œuvre du principe de la libre détermination, il convient de recourir à un référendum, dans ce cas-là aussi bien, il serait utile de savoir si, compte tenu de l'existence de liens juridiques avec un pays au moment de la colonisation par l'Espagne de ce territoire, il ne conviendrait pas de poser aux populations le problème de leur rattachement, de leur retour, ou au contraire de leur détachement, à ce qui, par hypothèse, serait leur ancienne mère patrie. » (Audience du 26 juin 1975.)
>
> « *ce problème de l'aménagement des questions dans un éventuel référendum est donc éclairé, dans une certaine mesure, par la nécessité pour l'Assemblée générale d'être au courant de toutes les données de l'affaire* » (*ibid.*) (les italiques sont de moi).

La Cour, étant parvenue à bon droit à la conclusion qu'il n'existait pas de liens juridiques « de nature à modifier l'application de la résolution 1514 ... et en particulier l'application du principe d'autodéterminaton grâce à l'expression libre et authentique de la volonté des populations du territoire », paraît être fondée à aller plus loin pour indiquer dans quelle mesure les liens juridiques qui existaient en fait pourraient avoir une incidence sur le processus de décolonisation et, dans ce cas, sous quelle forme concrète.

Ces liens juridiques entre le Sahara occidental et le Maroc ou la Mauritanie dont la Cour a constaté l'existence au moment de la colonisation espagnole n'étaient pas tels qu'ils puissent justifier aujourd'hui la réintégration ou la rétrocession du territoire sans consultation de ses habitants. La raison essentielle de cette conclusion est simplement la suivante: rien n'indique qu'à

l'époque de la colonisation espagnole un seul Etat, englobant les territoires du Sahara occidental et du Maroc, ou le Sahara occidental et la Mauritanie, ait été démembré par le colonisateur, fait qui justifierait sa reconstitution au stade actuel de la décolonisation. Par suite, les circonstances de l'espèce sortent du cadre du paragraphe 6 de la résolution 1514 (XV), selon lequel la destruction de l'unité nationale et de l'intégrité territoriale d'un pays est incompatible avec la Charte des Nations Unies, ce qui militerait donc en faveur d'une réintégration. Néanmoins, puisque la Cour constate l'existence de certains liens juridiques, il devient nécessaire d'examiner ces liens à seule fin d'apprécier l'importance qu'ils peuvent revêtir dans le processus de décolonisation et de rechercher s'ils appellent l'adoption d'une mesure précise. En un mot, la force et l'effectivité de ces liens, bien que limitées, doivent être considérées comme pouvant donner une indication des options qui pourraient être offertes à la population afin qu'elle exprime sa volonté. Conformément aux résolutions 1541 (XV) et 2625 (XXV), ces options pourraient être soit l'intégration au Maroc ou à la Mauritanie, soit la libre association avec l'un de ces deux Etats, soit encore le choix d'un statut souverain et indépendant pour le territoire. Même si l'on admet que les méthodes de décolonisation sont du ressort exclusif de l'Assemblée générale, il appartient cependant à un tribunal de souligner les rapports entre l'existence de liens juridiques et le processus de décolonisation, afin d'éclairer pleinement l'Assemblée. Agir ainsi, ce n'est pas empiéter sur les prérogatives de l'Assemblée, mais remplir le rôle qui incombe à la Cour comme organe judiciaire principal des Nations Unies.

Il existe d'excellentes raisons d'aller jusque-là mais pas plus loin. Tout d'abord, si l'on tient compte de la raison d'être même de la résolution 3292 (XXIX), il est clair que ce que l'Assemblée générale attend, en réponse à la question II, c'est une évaluation par la Cour de la nature des liens juridiques « qui pourraient influer sur la politique à suivre pour la décolonisation du Sahara occidental ». S'il est vrai que « la Cour ne saurait oublier l'objet en vue duquel l'avis est sollicité », il va sans dire que sans sortir de son rôle de tribunal elle peut aller jusqu'à éclairer ces aspects des options ouvertes à la population du territoire, quel que soit le mode de consultation, à fortiori quand la Cour juge cette consultation essentielle.

La seconde raison est que le Maroc et la Mauritanie ont l'un et l'autre plaidé cet aspect de la question, comme on l'a vu, et qu'il ne faudrait pas totalement le méconnaître.

II

La Cour a reconnu la validité du principe de l'autodétermination, « défini comme répondant à la nécessité de tenir compte de la volonté librement exprimée des peuples ». Elle a en outre conclu à juste titre que la demande d'avis ne diminue en rien la nécessité de déterminer la volonté librement exprimée de la population. A mon sens, la consultation des habitants du

territoire en instance de décolonisation est un impératif absolu, que la méthode suivie pour la décolonisation soit l'intégration, l'association ou l'indépendance. C'est ce qui ressort non seulement des dispositions générales de la Charte des Nations Unies mais aussi de résolutions particulières de l'Assemblée générale consacrées à ce sujet. Outre les articles 1, 2, 55 et 56 de la Charte et les paragraphes 2 et 5 de la résolution 1514 (XV), qui insistent de manière générale sur cet aspect, on trouve des dispositions expresses comme les principes VII et IX de la résolution 1541 (XV), qui énoncent catégoriquement que la libre association ou l'intégration « doit résulter du désir librement exprimé des populations du territoire ». C'est le principe VI *c)* de la résolution 1541 (XV) qui reconnaît que l'intégration peut être une méthode de décolonisation et le principe IX *b)* oblige à consulter la population pour réaliser l'autodétermination par cette voie. De même la résolution 2625 (XXV) sur les relations amicales revient sur la question pour souligner que lors de la décolonisation l'aboutissement à un statut politique quelconque doit être « librement décidé par un peuple ». Ainsi, alors même que l'un des Etats intéressés revendique l'intégration d'un territoire, comme dans la présente affaire, on ne saurait y procéder sans s'être assuré de la volonté librement exprimée des habitants — ce qui constitue le *sine qua non* de toute décolonisation.

Je suis néanmoins d'accord avec les éclaircissements donnés par la Cour sur certains cas où l'Assemblée générale n'a pas cru devoir consulter les habitants d'un territoire. Il en résulte selon moi que le principe de l'autodétermination n'est écarté que dans la mesure où l'on considère comme allant de soi la libre expression de la volonté de la population, en ce sens que l'on sait le résultat acquis d'avance ou que des consultations ont déjà eu lieu sous une forme quelconque ou encore que certaines particularités rendent cette consultation superflue. Des circonstances aussi exceptionnelles sont possibles; elles peuvent se rencontrer, mais elles ne sont pas présentes dans l'affaire actuelle au point que l'on puisse écarter le principe salutaire de la détermination de la volonté librement exprimée de la population du territoire qui, consultée, peut, si elle le souhaite, choisir de s'intégrer à n'importe lequel des Etats intéressés avoisinants.

Je répète que les cas relevant du paragraphe 6 de la résolution 1514 échappent à cette règle. De toute façon, comme on l'a vu, les faits de la cause ne paraissent pas appeler l'application de cette disposition particulière.

III

Un autre aspect qui me paraît également important concerne les observations formulées par la Cour au sujet du principe fondamental du consentement à la juridiction dans le cas où l'on utiliserait la voie consultative pour éluder la nécessité de ce consentement. Dans la présente affaire, l'Espagne n'a pas consenti à ce que les questions énoncées dans la résolution 3292 (XXIX) soient portées devant la Cour. Elle n'avait pas accepté non plus la proposition marocaine de saisir la Cour au contentieux. Il incombait donc à la Cour de

préciser la situation en droit, l'Espagne soutenant qu'il y avait absence de consentement à la juridiction de la Cour. S'il est vrai qu'il y a deux voies d'accès distinctes à la Cour, la voie consultative et la voie contentieuse, et que le consentement des Etats parties à un différend est le fondement de la juridiction en matière contentieuse alors qu'il en est autrement en matière d'avis, puisque l'avis de la Cour n'a qu'un « caractère consultatif » et qu'il est donné « non aux Etats, mais à l'organe habilité pour le lui demander » (*C.I.J. Recueil 1950*, p. 71), il est justifié de conclure que dans certaines circonstances le défaut de consentement d'un Etat intéressé pourrait rendre le prononcé d'un avis consultatif incompatible avec le caractère judiciaire de la Cour. La Cour a donc déclaré que si une demande d'avis consultatif était faite dans des circonstances indiquant clairement que l'intention ou le but était de tourner le principe du consentement, il en résulterait une situation dans laquelle le « pouvoir discrétionnaire que la Cour tient de l'article 65, paragraphe 1, du Statut fournirait des moyens juridiques suffisants pour assurer le respect du principe fondamental du consentement à la juridiction ».

Ce principe salutaire n'a pas été éludé en l'espèce attendu que la demande d'avis visait à obtenir de la Cour des conseils juridiques que l'Assemblée générale estimait utiles pour exercer ses fonctions en vue de la décolonisation prochaine d'un territoire. L'important dans ce contexte est donc d'avoir reconnu que des considérations d'opportunité judiciaire constitueraient une raison « décisive » de refuser d'émettre un avis, si le but de la requête était de tourner le principe suivant lequel un Etat n'est pas tenu de soumettre ses différends au règlement judiciaire contre sa volonté. La Cour renseigne d'autre part l'Assemblée générale sur l'application de l'article 96 de la Charte en déclarant que le consentement d'un Etat reste pertinent, en matière consultative, « pour apprécier s'il est opportun de rendre un avis ».

Vice-President AMMOUN, Judges FORSTER, PETRÉN, DILLARD and DE CASTRO and Judge *ad hoc* BONI append separate opinions to the Opinion of the Court.

Judge RUDA appends a dissenting opinion to the Opinion of the Court.

(*Initialled*) M.L.

(*Initialled*) S.A.

Annex 6

Taking note of the report of the Secretary-General[5] concerning the findings and recommendations of a high-level mission, which assessed the conditions of the displaced population and assisted in the formulation of an interim assistance programme focusing on the urgent humanitarian and rehabilitation requirements of the displaced,

1. *Expresses its solidarity* with the Government and the people of the Sudan in facing a grave and complex humanitarian and economic situation;

2. *Expresses its gratitude and appreciation* to Governments and international and non-governmental organizations that provided support and assistance to the Government of the Sudan in its relief and rehabilitation efforts;

3. *Recognizes* the valuable efforts of the Government of the Sudan to provide assistance to the people affected;

4. *Recognizes also* the importance of intense and wide co-operation with international relief organizations, as well as non-governmental organizations, to ensure the provision of humanitarian assistance where needed in all areas affected;

5. *Takes note* of the interim assistance programme contained in the report of the Secretary-General;[5]

6. *Calls upon* all States to contribute generously to programmes for the relief and rehabilitation of displaced persons;

7. *Expresses its appreciation* to the Secretary-General for his efforts to make the international community more aware of the enormous difficulties facing the displaced population and to mobilize assistance to the Sudan;

8. *Welcomes* the decision of the Secretary-General to organize, as requested by the Government of the Sudan and in close co-operation with the United Nations Development Programme and the World Bank, a meeting of bilateral donors and pertinent international institutions and non-governmental organizations in order to mobilize resources needed to implement a follow-up emergency assistance programme covering the rehabilitation and resettlement needs of displaced persons;

9. *Requests* the Secretary-General to apprise the Economic and Social Council at its first regular session of 1989 of his efforts and to report thereon to the General Assembly at its forty-fourth session.

70th plenary meeting
6 December 1988

43/53. Protection of global climate for present and future generations of mankind

The General Assembly,

Welcoming with appreciation the initiative taken by the Government of Malta in proposing for consideration by the Assembly the item entitled "Conservation of climate as part of the common heritage of mankind",

Concerned that certain human activities could change global climate patterns, threatening present and future generations with potentially severe economic and social consequences,

Noting with concern that the emerging evidence indicates that continued growth in atmospheric concentrations of "greenhouse" gases could produce global warming with an eventual rise in sea levels, the effects of which could be disastrous for mankind if timely steps are not taken at all levels,

Recognizing the need for additional research and scientific studies into all sources and causes of climate change,

Concerned also that emissions of certain substances are depleting the ozone layer and thereby exposing the earth's surface to increased ultra-violet radiation, which may pose a threat to, *inter alia*, human health, agricultural productivity and animal and marine life, and reaffirming in this context the appeal, contained in its resolution 42/182 of 11 December 1987, to all States that have not yet done so to consider becoming parties to 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, as soon as possible,

Recalling its resolutions 42/186 and 42/187 of 11 December 1987 on the Environmental Perspective to the Year 2000 and Beyond and on the report of the World Commission on Environment and Development, respectively,

Convinced that changes in climate have an impact on development,

Aware that a considerable amount of valuable work, particularly at the scientific level and in the legal field, has already been initiated on climate change, in particular by the United Nations Environment Programme, the World Meteorological Organization and the International Council of Scientific Unions and under the auspices of individual States,

Welcoming the convening in 1990 of a second World Climate Conference,

Recalling also the conclusions of the meeting held at Villach, Austria, in 1985,[6] which, *inter alia*, recommended a programme on climate change to be promoted by Governments and the scientific community with the collaboration of the World Meteorological Organization, the United Nations Environment Programme and the International Council of Scientific Unions,

Convinced that climate change affects humanity as a whole and should be confronted within a global framework so as to take into account the vital interests of all mankind,

1. *Recognizes* that climate change is a common concern of mankind, since climate is an essential condition which sustains life on earth;

2. *Determines* that necessary and timely action should be taken to deal with climate change within a global framework;

3. *Reaffirms* its resolution 42/184 of 11 December 1987, in which, *inter alia*, it agreed with the Governing Council of the United Nations Environment Programme that the Programme should attach importance to the problem of global climate change and that the Executive Director of the United Nations Environment Programme should ensure that the Programme co-operates closely with the World Meteorological Organization and the International Council of Scientific Unions and maintains an active, influential role in the World Climate Programme;

4. *Considers* that activities in support of the World Climate Programme, approved by the Congress and Executive Council of the World Meteorological Organization and elaborated in the system-wide medium-term environment programme for the period 1990-1995, which was approved by the Governing Council of the United Nations

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[5] A/43/755.

[6] See *United Nations Environment Programme, Annual Report of the Executive Director, 1985* (UNEP/GC.14/2), chap. IV, paras. 138-140.

Environment Programme,[7] should be accorded high priority by the relevant organs and programmes of the United Nations system;

5. *Endorses* the action of the World Meteorological Organization and the United Nations Environment Programme in jointly establishing an Intergovernmental Panel on Climate Change to provide internationally co-ordinated scientific assessments of the magnitude, timing and potential environmental and socio-economic impact of climate change and realistic response strategies, and expresses appreciation for the work already initiated by the Panel;

6. *Urges* Governments, intergovernmental and non-governmental organizations and scientific institutions to treat climate change as a priority issue, to undertake and promote specific, co-operative action-oriented programmes and research so as to increase understanding on all sources and causes of climate change, including its regional aspects and specific time-frames as well as the cause and effect relationship of human activities and climate, and to contribute, as appropriate, with human and financial resources to efforts to protect the global climate;

7. *Calls upon* all relevant organizations and programmes of the United Nations system to support the work of the Intergovernmental Panel on Climate Change;

8. *Encourages* the convening of conferences on climate change, particularly on global warming, at the national, regional and global levels in order to make the international community better aware of the importance of dealing effectively and in a timely manner with all aspects of climate change resulting from certain human activities;

9. *Calls upon* Governments and intergovernmental organizations to collaborate in making every effort to prevent detrimental effects on climate and activities which affect the ecological balance, and also calls upon non-governmental organizations, industry and other productive sectors to play their due role;

10. *Requests* the Secretary-General of the World Meteorological Organization and the Executive Director of the United Nations Environment Programme, utilizing the Intergovernmental Panel on Climate Change, immediately to initiate action leading, as soon as possible, to a comprehensive review and recommendations with respect to:

(*a*) The state of knowledge of the science of climate and climatic change;

(*b*) Programmes and studies on the social and economic impact of climate change, including global warming;

(*c*) Possible response strategies to delay, limit or mitigate the impact of adverse climate change;

(*d*) The identification and possible strengthening of relevant existing international legal instruments having a bearing on climate;

(*e*) Elements for inclusion in a possible future international convention on climate;

11. *Also requests* the Secretary-General to bring the present resolution to the attention of all Governments, as well as intergovernmental organizations, non-governmental organizations in consultative status with the Economic and Social Council and well-established scientific institutions with expertise in matters concerning climate;

12. *Further requests* the Secretary-General to report to the General Assembly at its forty-fourth session on the implementation of the present resolution;

13. *Decides* to include this question in the provisional agenda of its forty-fourth session, without prejudice to the application of the principle of biennialization.

70th plenary meeting
6 December 1988

43/178. Assistance to the Palestinian people

The General Assembly,

Recalling its resolution 42/166 of 11 December 1987,

Taking note of Economic and Social Council resolution 1988/54 of 26 July 1988,

Bearing in mind the Declaration on the Granting of Independence to Colonial Countries and Peoples,[8]

Recalling the Programme of Action for the Achievement of Palestinian Rights, adopted by the International Conference on the Question of Palestine,[9]

Taking into account the *intifadah* of the Palestinian people in the occupied Palestinian territory, including Jerusalem, against the Israeli occupation including its economic and social policies and practices,

Affirming that the Palestinian people cannot develop their national economy as long as the Israeli occupation persists,

Taking into consideration the recent steps taken by Jordan concerning the occupied Palestinian West Bank,

Aware of the increasing need to provide economic and social assistance to the Palestinian people,

1. *Takes note* of the report of the Secretary-General on assistance to the Palestinian people;[10]

2. *Regrets* that the programme of economic and social assistance to the Palestinian people has not been developed as requested by the General Assembly in its resolution 42/166;

3. *Requests* the Secretary-General to charge the United Nations Centre for Human Settlements (Habitat) with supervising the development of the programme and to provide it with the funds needed to engage twenty experts to prepare an adequate programme, in close co-operation with the Palestine Liberation Organization, taking into account the *intifadah* of the Palestinian people in the occupied Palestinian territory, including Jerusalem, and its implications;

4. *Expresses its appreciation* to those States, United Nations bodies and intergovernmental and non-governmental organizations that have provided assistance to the Palestinian people;

5. *Urges* Member States, organizations of the United Nations system and intergovernmental and non-governmental organizations to disburse their aid or any other forms of assistance to the occupied Palestinian territory solely for the benefit of the Palestinian people and in a manner that will not serve to prolong the Israeli occupation;

6. *Calls* for the provision of emergency assistance to the Palestinian people in the occupied Palestinian terri-

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[7] See *Official Records of the General Assembly, Forty-third Session, Supplement No. 25* (A/43/25), annex, decision SS.I/3.

[8] Resolution 1514 (XV).

[9] *Report of the International Conference on the Question of Palestine, Geneva, 29 August-7 September 1983* (United Nations publication, Sales No. E.83.I.21), chap. I, sect. B.

[10] A/43/367-E/1988/82 and Corr.1 and 2.

Annex 7

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Center in Woods Hole; Dr. Manabe from NOAA, Geophysical Fluid Dynamics Laboratory in Princeton; Dr. Dudek, a senior economist with the EDF; and finally Dr. William Moomaw, Senior Associate of WRI, World Resources Institute.

All of your statements will be included in full in the record, and we would ask you to summarize in the way that you think would be most beneficial. And after you have all had a chance to testify, we will then go to questions and discussions with the members of the Senate. So, gentlemen, thank you very much for being here. Dr. Hansen, if you would start us off, we'd appreciate it.

STATEMENT OF DR. JAMES HANSEN, DIRECTOR, NASA GODDARD INSTITUTE FOR SPACE STUDIES

Dr. HANSEN. Mr. Chairman and committee members, thank you for the opportunity to present the results of my research on the greenhouse effect which has been carried out with my colleagues at the NASA Goddard Institute for Space Studies.

I would like to draw three main conclusions. Number one, the earth is warmer in 1988 than at any time in the history of instrumental measurements. Number two, the global warming is now large enough that we can ascribe with a high degree of confidence a cause and effect relationship to the greenhouse effect. And number three, our computer climate simulations indicate that the greenhouse effect is already large enough to begin to effect the probability of extreme events such as summer heat waves.

My first viewgraph, which I would like to ask Suki to put up if he would, shows the global temperature over the period of instrumental records which is about 100 years. The present temperature is the highest in the period of record. The rate of warming in the past 25 years, as you can see on the right, is the highest on record. The four warmest years, as the Senator mentioned, have all been in the 1980s. And 1988 so far is so much warmer than 1987, that barring a remarkable and improbable cooling, 1988 will be the warmest year on the record.

Now let me turn to my second point which is causal association of the greenhouse effect and the global warming. Causal association requires first that the warming be larger than natural climate variability and, second, that the magnitude and nature of the warming be consistent with the greenhouse mechanism. These points are both addressed on my second viewgraph. The observed warming during the past 30 years, which is the period when we have accurate measurements of atmospheric composition, is shown by the heavy black line in this graph. The warming is almost 0.4 degrees Centigrade by 1987 relative to climatology, which is defined as the 30 year mean, 1950 to 1980 and, in fact, the warming is more than 0.4 degrees Centigrade in 1988. The probability of a chance warming of that magnitude is about 1 percent. So, with 99 percent confidence we can state that the warming during this time period is a real warming trend.

The other curves in this figure are the results of global climate model calculations for three scenarios of atmospheric trace gas growth. We have considered several scenarios because there are uncertainties in the exact trace gas growth in the past and espe-

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cially in the future. We have considered cases ranging from business as usual, which is scenario A, to draconian emission cuts, scenario C, which would totally eliminate net trace gas growth by year 2000.

The main point to be made here is that the expected global warming is of the same magnitude as the observed warming. Since there is only a 1 percent chance of an accidental warming of this magnitude, the agreement with the expected greenhouse effect is of considerable significance. Moreover, if you look at the next level of detail in the global temperature change, there are clear signs of the greenhouse effect. Observational data suggests a cooling in the stratosphere while the ground is warming. The data suggest somewhat more warming over land and sea ice regions than over open ocean, more warming at high latitudes than at low latitudes, and more warming in the winter than in the summer. In all of these cases, the signal is at best just beginning to emerge, and we need more data. Some of these details, such as the northern hemisphere high latitude temperature trends, do not look exactly like the greenhouse effect, but that is expected. There are certainly other climate change factors involved in addition to the greenhouse effect.

Altogether the evidence that the earth is warming by an amount which is too large to be a chance fluctuation and the similarity of the warming to that expected from the greenhouse effect represents a very strong case. In my opinion, that the greenhouse effect has been detected, and it is changing our climate now.

Then my third point. Finally, I would like to address the question of whether the greenhouse effect is already large enough to affect the probability of extreme events, such as summer heat waves. As shown in my next viewgraph, we have used the temperature changes computed in our global climate model to estimate the impact of the greenhouse effect on the frequency of hot summers in Washington, D.C. and Omaha, Nebraska. A hot summer is defined as the hottest one-third of the summers in the 1950 to 1980 period, which is the period the Weather Bureau uses for defining climatology. So, in that period the probability of having a hot summer was 33 percent, but by the 1990s, you can see that the greenhouse effect has increased the probability of a hot summer to somewhere between 55 and 70 percent in Washington according to our climate model simulations. In the late 1980s, the probability of a hot summer would be somewhat less than that. You can interpolate to a value of something like 40 to 60 percent.

I believe that this change in the frequency of hot summers is large enough to be noticeable to the average person. So, we have already reached a point that the greenhouse effect is important. It may also have important implications other than for creature comfort.

My last viewgraph shows global maps of temperature anomalies for a particular month, July, for several different years between 1986 and 2029, as computed with our global climate model for the intermediate trace gas scenario B. As shown by the graphs on the left where yellow and red colors represent areas that are warmer than climatology and blue areas represent areas that are colder than climatology, at the present time in the 1980s the greenhouse

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warming is smaller than the natural variability of the local temperature. So, in any given month, there is almost as much area that is cooler than normal as there is area warmer than normal. A few decades in the future, as shown on the right, it is warm almost everywhere.

However, the point that I would like to make is that in the late 1980's and in the 1990's we notice a clear tendency in our model for greater than average warming in the southeast United States and the midwest. In our model this result seems to arise because the Atlantic Ocean off the coast of the United States warms more slowly than the land. This leads to high pressure along the east coast and circulation of warm air north into the midwest or the southeast. There is only a tendency for this phenomenon. It is certainly not going to happen every year, and climate models are certainly an imperfect tool at this time. However, we conclude that there is evidence that the greenhouse effect increases the likelihood of heat wave drought situations in the southeast and midwest United Stats even though we cannot blame a specific drought on the greenhouse effect.

Therefore, I believe that it is not a good idea to use the period 1950 to 1980 for which climatology is normally defined as an indication of how frequently droughts will occur in the future. If our model is approximately correct, such situations may be more common in the next 10 to 15 years than they were in the period 1950 to 1980.

Finally, I would like to stress that there is a need for improving these global climate models, and there is a need for global observations if we're going to obtain a full understanding of these phenomena.

That concludes my statement, and I'd be glad to answer questions if you'd like.

[The prepared statement of Dr. Hansen follows:]

Annex 8

1988 Sep 27 Tu

Margaret Thatcher

Speech to the Royal Society (climate change)

Document type: Speeches, interviews, etc.

Venue: Fishmongers' Hall, City of London

Source: Thatcher Archive: speaking text

Editorial comments: Embargoed until 2115: MT spoke after dinner. The text is marked "Please check against delivery".

No.10 had assumed that the event would be filmed for television and that lighting would be provided in the process. They were wrong. TV showed no interest and so MT spoke by candlelight.

Importance ranking: Key

Word count: 2376

Themes: Autobiographical comments, Industry, Science & technology, Environment

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Mr President, Your Excellencies, Fellows of the Royal Society, Ladies and Gentlemen.

It was at your annual dinner of 1972 that I had the privilege of speaking to your Society in my capacity as Secretary of State for Education and Science.

This is my first opportunity as Prime Minister to address our Society of which I am so proud to be a Fellow.

I confess that I am quite pleased that I didn't continue my work on glyceride monolayers in the early 1950s or I might never have got here at all!

But I am reminded of a reviewer of Solly Zuckerman 's recent autobiography who said that as a rule scientists rarely make successful politicians!

From my experience let me say this: in today's world it is no bad thing for a politician to have had the benefit of a scientific background.

And not only politicians.

Those who work in industry, in commerce, in investment. Indeed, so important has it become that I believe we are right to make science a compulsory subject for all schoolchildren.

Over its 343 year history, the Royal Society has become the leading British academy of science with over 1,000 Fellows and, in keeping with your international tradition and standing, nearly 100 foreign members.

As you know Mr. President we have tried in Number 10 Downing Street to recognise the enormous contribution that scientists have made and are making to our prosperity and intellectual reputation as a people, by showing prominently, portraits of eminent scientists among our pictures of those who have done so much for our country. And so we have Michael Faraday in the hall. We have Isaac Newton in the dining room, and paintings of Robert Boyle, Humphrey Davy, Edmund Halley and Dorothy Hodgkin in our other rooms. Indeed we have just redecorated No. 10 and have changed some of the other pictures so there are several spaces vacant! I should like to fill them during my years of office by more of today's scientists. Alas we have found that many distinguished scientists do not devote time to being painted by distinguished artists on canvasses of the right size! I should be grateful if you could rectify this state of affairs.

Everyone here and no one more than myself, will support Whitehead's statement that a nation which does not value trained intelligence is doomed.

Science and the pursuit of knowledge are given high priority by successful countries, not because they are a luxury which the [end p1] prosperous can afford; but because experience has taught us that knowledge and its effective use are vital to national prosperity and international standing. But we need to guard against two dangerous fallacies: first that research should be driven wholly by utilitarian considerations; and second, the opposite, that excellence in science cannot be attained if work is undertaken for economic or other useful purposes.

We should not forget that industry has had its share of Nobel prizes. AT and T for the transistor; IBM for warm super-conductors. EMI for X-Ray Tomography. It is time we won some more.

In a January White Paper and on various occasions since, this Government has made it clear that the commercial development of scientific principles should mainly be the task of industry.

It is in industry's own interest to pursue the research needed for its own business, collaborating with partners as necessary.

Industry could also help our academics to spot commercial applications when they arise unexpectedly during the course of more basic work. There are too many stories of British discoveries being published without patent protection, only to make money for foreign lands.

Industry is becoming more scientific-minded: scientists more industry-minded. Both have a responsibility to recognise the practical value of the ideas which are

being developed.

BASIC SCIENCE

In your Dimbleby lecture on knowledge and its power, Mr President, you stressed the importance of basic science in a challenging way. You will know from our joint attendance at the new Advisory Council on Science and Technology (ACOST), that this is a view which I share.

It is mainly by unlocking nature's most basic secrets, whether it be about the structure of matter and the fundamental forces or about the nature of life itself, that we have been able to build the modern world. This is a world which is able to sustain far more people with a decent standard of life than Malthus and even thinkers of a few decades ago would have believed possible. It is not only material welfare. It is about access to the arts, no longer the preserve of the very few, which the gramophone, radio, colour photography, satellites and television have already brought, and which holography will transform further.

Of course, the nation as a whole must support the discovery of basic scientific knowledge through Government finance. But there are difficult choices and I should like to make just three points. [end p2]

First, although basic science can have colossal economic rewards, they are totally unpredictable. And therefore the rewards cannot be judged by immediate results. Nevertheless the value of Faraday's work today must be higher than the capitalisation of all the shares on the Stock Exchange!

Indeed it is astonishing how quickly the benefits of curiosity driven research sometimes appear. During the Great War, our then President J. J. Thompson, cited the use of X-rays in locating and assessing the damage of bullet wounds. The value of the saving of life and limb was beyond calculation yet X-rays had only been accidentally discovered in 1895!

Second, no nation has unlimited funds, and it will have even less if it wastes them. A commitment to basic science cannot mean a blank cheque for everyone with—if I may put it colloquially—a bee in his bonnet. That would spread the honey too thinly.

So what projects to support? Politicians can't decide and heaven knows it is difficult enough for our own Advisory Body of Scientists to say yea or nay to the many applications. I have always had a great deal of sympathy for Max Perutz 's view that we should be ready to support those teams, however small, which can demonstrate the intellectual flair and leadership which is driven by intense curiosity and dedication.

A good researcher is keenly competitive and wants to be first.

The final stage of the race for the DNA structure was as exciting as any Olympic marathon. The natural desire of gifted people to excel and gain the credit for their work must be harnessed. It is a great source of intellectual energy.

We accept that we cannot measure the value of the work by economic output but this is no argument for lack of careful management in the way specific projects are conducted. The money is not for top-heavy administration but for research.

If only we could cut some £20 million from very large scale projects—where the non-scientists sometimes outnumber the scientists—that money could provide support for hundreds of young researchers whose requirements are measured in thousands of pounds.

My third point is that, despite an increase in the basic science budget of 15 per cent in real terms since 1979, the United Kingdom is only able to carry out a small proportion of the world's fundamental research and that of course is true of most countries.

It is therefore very important to encourage our own people to be aware of the work that is going on overseas and to come back here with their broadened outlook and new knowledge. It is also healthy to have overseas people working here. [end p3] We already do much to encourage international travel and teamwork.

The Royal Society has 44 exchange agreements with learned societies overseas, leading to 1000 exchanges a year. Through SERC (the Science and Engineering Research Council), the Government funds some 120 post doctoral fellowships, half of which are tenable overseas for one year and often more.

The recent visits of the Presidents of the Soviet and Chinese Academies and the increased exchanges to which they will lead are most welcome. The Society's work in promoting internationalism has my strongest support.

Mr. President, this country will be judged by its contribution to knowledge and its capacity to turn that knowledge to advantage. It is only when industry and academia recognise and mobilise each other's strengths that the full intellectual energy of Britain will be released. In this respect we greatly appreciate your work and that of Sir Francis Tombs, Chairman of ACOST.

THE ENVIRONMENT

Mr. President, the Royal Society's Fellows and other scientists, through hypothesis, experiment and deduction have solved many of the world's problems.

—Research on medicine has saved millions and millions of lives as you have tackled diseases such as malaria, smallpox, tuberculosis and others. Consequently, the world's population which was 1 billion in 1800, 2 billion in 1927 is now 5 billion souls and rising.

—Research on agriculture has developed seeds and fertilizers sufficient to sustain that rising population contrary to the gloomy prophesies of two or three decades ago. But we are left with pollution from nitrates and an enormous increase in methane which is causing problems.

—Engineering and scientific advance have given us transport by land and air, the capacity and need to exploit fossil fuels which had lain unused for millions of years. One result is a vast increase in carbon dioxide. And this has happened just when great tracts of forests which help to absorb it have been cut down.

For generations, we have assumed that the efforts of mankind would leave the fundamental equilibrium of the world's systems and atmosphere stable. But it is possible that with all these enormous changes (population, agricultural, use of fossil fuels) concentrated into such a short period of time, we have unwittingly begun a massive experiment with the system of this planet itself.

Recently three changes in atmospheric chemistry have become familiar subjects of concern. The first is the increase in the greenhouse gases—carbon dioxide, methane, and chlorofluorocarbons—which has led some [end p4] to fear that we are creating a global heat trap which could lead to climatic instability. We are told that a warming effect of 1°C per decade would greatly exceed the capacity of our natural habitat to cope. Such warming could cause accelerated melting of glacial ice and a consequent increase in the sea level of several feet over the next century. This was brought home to me at the Commonwealth Conference in Vancouver last year when the President of the Maldive Islands reminded us that the highest part of the Maldives is only six feet above sea level. The population is 177,000. It is noteworthy that the five warmest years in a century of records have all been in the 1980s—though we may not have seen much evidence in Britain!

The second matter under discussion is the discovery by the British Antarctic Survey of a large hole in the ozone layer which protects life from ultra-violet radiation. We don't know the full implications of the ozone hole nor how it may interact with the greenhouse effect. Nevertheless it was common sense to support a worldwide agreement in Montreal last year to halve world consumption of chlorofluorocarbons by the end of the century. As the sole measure to limit ozone depletion, this may be insufficient but it is a start in reducing the pace of change while we continue the detailed study of the problem on which our (the British) Stratospheric Ozone Review Group is about to report.

The third matter is acid deposition which has affected soils, lakes and trees downwind from industrial centres. Extensive action is being taken to cut down emission of sulphur and nitrogen oxides from power stations at great but necessary expense.

In studying the system of the earth and its atmosphere we have no laboratory in which to carry out controlled experiments. We have to rely on observations of natural systems. We need to identify particular areas of research which will help to establish cause and effect. We need to consider in more detail the likely effects of change within precise timescales. And to consider the wider implications for policy—for energy production, for fuel efficiency, for reforestation. This is no small task, for the annual increase in atmospheric carbon dioxide alone is of the order of three billion tonnes. And half the carbon emitted since the Industrial Revolution remains in the atmosphere. We have an extensive research programme at our meteorological office and we provide one of the world's four centres for the study of climatic change. We must ensure that what we do is founded on good science to establish cause and effect.

In the past when we have identified forms of pollution, we have shown our capacity to act effectively. The great London Smogs are now only a nightmare of the past. We have cut airborne lead by 50 per cent. We are spending £4 billion on cleansing the Mersey Basin alone; [end p5] and the Thames now has the cleanest metropolitan estuary in the world. Even though this kind of action may cost a lot, I believe it to be money well and necessarily spent because the health of the economy and the health of our environment are totally dependent upon each other.

The Government espouses the concept of sustainable economic development. *Beginning of section checked against BBC Radio News Report 0700 28 September 1988*

Stable prosperity can be achieved throughout the world provided the environment is nutured and safeguarded.

Protecting this balance of nature is therefore one of the great challenges of the late Twentieth Century *[End of section checked against BBC Radio News Report 0700 28 September 1988.]* and one in which I am sure your advice will be repeatedly sought.

PERORATION

I have spoken about my own commitment to science and to the environment. And I have given you some idea of what government is doing. I hope that the Royal Society will generate increased popular interest in science by explaining the importance and excitement of your work. When Arthur Eddington presented his

results to this Society in 1919, showing the bending of starlight, it made headlines. It is reported that many people could not get into the meeting so anxious were the crowds to find out whether the intellectual paradox of curved space had really been demonstrated. Should we be doing more to explain why we are looking for the Higgs Boson at CERN and trying to decode the human Genome? This is a golden age of discovery and new thought. The natural world is full of fascination providing the doors of understanding are opened. I applaud our Royal Society for its manifold achievements and congratulate you Mr President on your splendid leadership. I ask you to drink a toast to the Royal Society.

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Annex 9

Special Message to the Congress on Conservation and Restoration of Natural Beauty. | The American Presidency Project (ucsb.edu)

LYNDON B. JOHNSON

36th President of the United States: 1963 - 1969

Special Message to the Congress on Conservation and Restoration of Natural Beauty.

February 08, 1965

To the Congress of the United States:

For centuries Americans have drawn strength and inspiration from the beauty of our country. It would be a neglectful generation indeed, indifferent alike to the judgment of history and the command of principle, which failed to preserve and extend such a heritage for its descendants.

Yet the storm of modern change is threatening to blight and diminish in a few decades what has been cherished and protected for generations.

A growing population is swallowing up areas of natural beauty with its demands for living space, and is placing increased demand on our overburdened areas of recreation and pleasure.

The increasing tempo of urbanization and growth is already depriving many Americans of the right to live in decent surroundings. More of our people are crowding into cities and being cut off from nature. Cities themselves reach out into the countryside, destroying streams and trees and meadows as they go. A modern highway may wipe out the equivalent of a fifty acre park with every mile. And people move out from the city to get closer to nature only to find that nature has moved farther from them.

The modern technology, which has added much to our lives can also have a darker side. Its uncontrolled waste products are menacing the world we live in, our enjoyment and our health. The air we breathe, our water, our soil and wildlife, are being blighted by the poisons and chemicals which are the by-products of technology and industry. The skeletons of discarded cars litter the countryside. The same society which receives the rewards of technology, must, as a cooperating whole, take responsibility for control.

To deal with these new problems will require a new conservation. We must not only protect the countryside and save it from destruction, we must restore what has been destroyed and salvage the beauty and charm of our cities. Our conservation must be not just the classic conservation of protection and development, but a creative conservation of restoration and innovation. Its concern is not with nature alone, but with the total relation between man and the world around him. Its object is not just man's welfare but the dignity of man's spirit.

In this conservation the protection and enhancement of man's opportunity to be in contact with beauty must play a major role.

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This means that beauty must not be just a holiday treat, but a part of our daily life. It means not just easy physical access, but equal social access for rich and poor, Negro and white, city dweller and farmer.

Beauty is not an easy thing to measure. It does not show up in the gross national product, in a weekly pay check, or in profit and loss statements. But these things are not ends in themselves. They are a road to satisfaction and pleasure and the good life. Beauty makes its own direct contribution to these final ends. Therefore it is one of the most important components of our true national income, not to be left out simply because statisticians cannot calculate its worth.

And some things we do know. Association with beauty can enlarge man's imagination and revive his spirit. Ugliness can demean the people who live among it. What a citizen sees every day is his America. If it is attractive it. it adds to the quality of his the life. If it is ugly it can degrade his existence.

Beauty has other immediate values. It adds to safety whether removing direct dangers to health or making highways less monotonous and dangerous. We also know that those who live in blighted and squalid conditions are more susceptible to anxieties and mental disease.

Ugliness is costly. It can be expensive to clean a soot smeared building, or to build new areas of recreation when the old landscape could have been preserved far more cheaply.

Certainly no one would hazard a national definition of beauty. But we do know that nature is nearly always beautiful. We do, for the most part, know what is ugly. And we can introduce, into all our planning, our programs, our building and our growth, a conscious and active concern for the values of beauty. If we do this then we can be successful in preserving a beautiful America.

There is much the federal government can do, through a range of specific programs, and as a force for public education. But a beautiful America will require the effort of government at every level, of business, and of private groups. Above all it will require the concern and action of individual citizens, alert to danger, determined to improve the quality of their surroundings, resisting blight, demanding and building beauty for themselves and their children.

I am hopeful that we can summon such a national effort. For we have not chosen to have an ugly America. We have been careless, and often neglectful. But now that the danger is clear and the hour is late this people can place themselves in the path of a tide of blight which is often irreversible and always destructive.

The Congress and the Executive branch have each produced conservation giants in the past. During the 88th Congress it was legislative executive teamwork that brought progress. It is this same kind of partnership that will ensure our continued progress.

In that spirit as a beginning and stimulus I make the following proposals:

THE CITIES Thomas Jefferson wrote that communities "should be planned with an eye to the effect made upon the human spirit by being continually surrounded with a maximum of beauty."

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We have often sadly neglected this advice in the modern American city. Yet this is where most of our people live. It is where the character of our young is formed. It is where American civilization will be increasingly concentrated in years to come.

Such a challenge will not be met with a few more parks or playgrounds. It requires attention to the architecture of building, the structure of our roads, preservation of historical buildings and monuments, careful planning of new suburbs. A concern for the enhancement of beauty must infuse every aspect of the growth and development of metropolitan areas. It must be a principal responsibility of local government, supported by active and concerned citizens.

Federal assistance can be a valuable stimulus and help to such local efforts.

I have recommended a community extension program which will bring the resources of the university to focus on problems of the community just as they have long been concerned with our rural areas. Among other things, this program will help provide training and technical assistance to aid in making our communities more attractive and vital. In addition, under the Housing Act of 1964, grants will be made to States for training of local governmental employees needed for community development. I am recommending a 1965 supplemental appropriation to implement this program.

We now have two programs which can be of special help in creating areas of recreation and beauty for our metropolitan area population: the Open Space Land Program, and the Land and Water Conservation Fund.

I have already proposed full funding of the Land and Water Conservation Fund, and directed the Secretary of the Interior to give priority attention to serving the needs of our growing urban population.

The primary purpose of the Open Space Program has been to help acquire and assure open spaces in urban areas. I propose a series of new matching grants for improving the natural beauty of urban open space.

The Open Space Program should be adequately financed, and broadened by permitting grants to be made to help city governments acquire and clear areas to create small parks, squares, pedestrian malls and playgrounds.

In addition I will request authority in this program for a matching program to cities for landscaping, installation of outdoor lights and benches, creating attractive cityscapes along roads and in business areas, and for other beautification purposes.

Our city parks have not, in many cases, realized their full potential as sources of pleasure and play. I recommend on a matching basis a series of federal demonstration projects in city parks to use the best thought and action to show how the appearance of these parks can better serve the people of our towns and metropolitan areas.

All of these programs should be operated on the same matching formula to avoid unnecessary competition among programs and increase the possibility of cooperative effort. I will propose such a standard formula.

In a future message on the cities I will recommend other changes in our housing programs designed to strengthen the sense of community of which natural beauty is an important component.

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In almost every part of the country citizens are rallying to save landmarks of beauty and history. The government must also do its share to assist these local efforts which have an important national purpose. We will encourage and support the National Trust for Historic Preservation in the United States, chartered by Congress in 1949- I shall propose legislation to authorize supplementary grants to help local authorities acquire, develop and manage private properties for such purposes.

The Registry of National Historic Landmarks is a fine federal program with virtually no federal cost. I commend its work and the new wave of interest it has evoked in historical preservation.

THE COUNTRYSIDE Our present system of parks, seashores and recreation areas--monuments to the dedication and labor of far-sighted men--do not meet the needs of a growing population.

The full funding of the Land and Water Conservation Fund will be an important step in making this a Parks-for-America decade.

I propose to use this fund to acquire lands needed to establish:

--Assateague Island National Seashore, Maryland-Virginia

Tocks Island National Recreation Area, New Jersey-Pennsylvania

Cape Lookout National Seashore, North Carolina

Sleeping Bear Dunes National Lakeshore, Michigan

Indiana Dunes National Lakeshore, Indiana

Oregon Dunes National Seashore, Oregon

Great Basin National Park, Nevada

Guadalupe Mountains National Park, Texas

Spruce Knob, Seneca Rocks National Recreation Area, West Virginia

Bighorn Canyon National Recreation Area, Montana-Wyoming

Flaming Gorge National Recreation, Utah-Wyoming

Whiskeytown-Shasta-Trinity National Recreation Area, California.

In addition, I have requested the Secretary of Interior, working with interested groups, to conduct a study on the desirability of establishing a Redwood National Park in California.

I will also recommend that we add prime outdoor recreation areas to our National Forest system, particularly in the populous East; and proceed on schedule with studies required to define and enlarge the Wilderness System established by the 88th Congress. We will also continue progress on our refuge system for migratory waterfowl.

Faulty strip and surface mining practices have left ugly scars which mar the beauty of the landscape in many of our States. I urge your strong support of the nationwide strip and surface mining study provided by the Appalachian Regional legislation, which will furnish the factual basis for a fair and reasonable approach to the correction of these past errors.

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I am asking the Secretary of Agriculture to work with State and local organizations in developing a cooperative program for improving the beauty of the privately owned rural lands which comprise three-fourths of the Nation's area. Much can be done within existing Department of Agriculture programs without adding to cost.

The 28 million acres of land presently held and used by our Armed Services is an important part of our public estate. Many thousands of these acres will soon become surplus to military needs. Much of this land has great potential for outdoor recreation, wildlife, and conservation uses consistent with military requirements. This potential must be realized through the fullest application of multiple-use principles. To this end I have directed the Secretaries of Defense and Interior to conduct a "conservation inventory" of all surplus lands.

HIGHWAYS More than any country ours is an automobile society. For most Americans the automobile is a principal instrument of transportation, work, daily activity, recreation and pleasure. By making our roads highways to the enjoyment of nature and beauty we can greatly enrich the life of nearly all our people in city and countryside alike.

Our task is two-fold. First, to ensure that roads themselves are not destructive of nature and natural beauty. Second, to make our roads ways to recreation and pleasure.

I have asked the Secretary of Commerce to take a series of steps designed to meet this objective. This includes requiring landscaping on all federal interstate primary and urban highways, encouraging the construction of rest and recreation areas along highways, and the preservation of natural beauty adjacent to highway rights-of-way.

Our present highway law permits the use of up to 3% of all federal-aid funds to be used without matching for the preservation of natural beauty. This authority has not been used for the purpose intended by Congress. I will take steps, including recommended legislation if necessary, to make sure these funds are, in fact, used to enhance beauty along our highway system. This will dedicate substantial resources to this purpose.

I will also recommend that a portion of the funds now used for secondary roads be set aside in order to provide access to areas of rest and recreation and scenic beauty along our nation's roads, and for rerouting or construction of highways for scenic or parkway purposes.

The Recreation Advisory Council is now completing a study of the role which scenic roads and parkways should play in meeting our highway and recreation needs. After receiving the report, I will make appropriate recommendations.

The authority for the existing program of outdoor advertising control expires on June 30, 1965, and its provisions have not been effective in achieving the desired goal. Accordingly, I will recommend legislation to ensure effective control of billboards along our highways.

In addition, we need urgently to work towards the elimination or screening of unsightly, beauty-destroying junkyards and auto graveyards along our highways. To this end, I will also recommend necessary legislation to achieve effective control, including Federal assistance in appropriate cases where necessary.

I hope that, at all levels of government, our planners and builders will remember that highway beautification is more than a matter of planting trees or setting aside scenic areas.

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The roads themselves must reflect, in location and design, increased respect for the natural and social integrity and unity of the landscape and communities through Which they pass.

RIVERS Those who first settled this continent found much to marvel at. Nothing was a greater source of wonder and amazement than the power and majesty of American rivers. They occupy a central place in myth and legend, folklore and literature.

They were our first highways, and some remain among the most important. We have had to control their ravages, harness their power, and use their water to help make whole regions prosper.

Yet even this seemingly indestructible natural resource is in danger.

Through our pollution control programs we can do much to restore our rivers. We will continue to conserve the water and power for tomorrow's needs with well-planned reservoirs and power dams. But the time has also come to identify and preserve free flowing stretches of our great scenic rivers before growth and development make the beauty of the unspoiled waterway a memory.

To this end I will shortly send to the Congress a Bill to establish a National Wild Rivers System.

THE POTOMAC The river rich in history and memory which flows by our nation's capital should serve as a model of scenic and recreation values for the entire country. To meet this objective I am asking the Secretary of the Interior to review the Potomac River basin development plan now under review by the Chief of Army Engineers, and to work with the affected States and local governments, the District of Columbia and interested federal agencies to prepare a program for my consideration.

A program must be devised which will:

a. Clean up the river and keep it clean, so it can be used for boating, swimming and fishing.

b. Protect its natural beauties by the acquisition of scenic easements, zoning or other measures.

c. Provide adequate recreational facilities, and

d. Complete the presently authorized George Washington Memorial Parkway on both banks.

I hope action here will stimulate and inspire similar efforts by States and local governments on other urban rivers and waterfronts, such as the Hudson in New York. They are potentially the greatest single source of pleasure for those who live in most of our metropolitan areas.

TRAILS The forgotten outdoorsmen of today are those who like to walk, hike, ride horseback or bicycle. For them we must have trails as well as highways. Nor should motor vehicles be permitted to tyrannize the more leisurely human traffic.

Old and young alike can participate. Our doctors recommend and encourage such activity for fitness and fun.

I am requesting, therefore, that the Secretary of the Interior work with his colleagues in the federal government and with state and local leaders and recommend to me a cooperative program to encourage a national system of trails, building up the more than hundred thousand miles of trails in our National Forests and Parks.

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There are many new and exciting trail projects underway across the land. In Arizona, a county has arranged for miles of irrigation canal banks to be used by riders and hikers. In Illinois, an abandoned railroad right of way is being developed as a "Prairie Path." In New Mexico utility rights of way are used as public trails.

As with so much of our quest for beauty and quality, each community has opportunities for action. We can and should have an abundance of trails for walking, cycling and horseback riding, in and close to our cities. In the back country we need to copy the great Appalachian Trail in all parts of America, and to make full use of rights of way and other public paths.

POLLUTION One aspect of the advance of civilization is the evolution of responsibility for disposal of waste. Over many generations society gradually developed techniques for this purpose. State and local governments, landlords and private citizens have been held responsible for ensuring that sewage and garbage did not menace health or contaminate the environment.

In the last few decades entire new categories of waste have come to plague and menace the American scene. These are the technological wastes--the by-products of growth, industry, agriculture, and science. We cannot wait for slow evolution over generations to deal with them.

Pollution is growing at a rapid rate. Some pollutants are known to be harmful to health, while the effect of others is uncertain and unknown. In some cases we can control pollution with a larger effort. For other forms of pollution we still do not have effective means of control.

Pollution destroys beauty and menaces health. It cuts down on efficiency, reduces property values and raises taxes.

The longer we wait to act, the greater the dangers and the larger the problem.

Large-scale pollution of air and waterways is no respecter of political boundaries, and its effects extend far beyond those who cause it.

Air pollution is no longer confined to isolated places. This generation has altered the composition of the atmosphere on a global scale through radioactive materials and a steady increase in carbon dioxide from the burning of fossil fuels. Entire regional airsheds, crop plant environments, and river basins are heavy with noxious materials. Motor vehicles and home heating plants, municipal dumps and factories continually hurl pollutants into the air we breathe. Each day almost 50,000 tons of unpleasant, and sometimes poisonous, sulfur dioxide are added to the atmosphere, and our automobiles produce almost 300,000 tons of other pollutants.

In Donora, Pennsylvania in 1948, and New York City in 1953 serious illness and some deaths were produced by sharp increases in air pollution. In New Orleans, epidemic outbreaks of asthmatic attacks are associated with air pollutants. Three-fourths of the eight million people in the Los Angeles area are annoyed by severe eye irritation much of the year. And our health authorities are increasingly concerned with the damaging effects of the continual breathing of polluted air by all our people in every city in the country.

In addition to its health effects, air pollution creates filth and gloom and depreciates property values of entire neighborhoods. The White House itself is being dirtied with soot from polluted air.

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Every major river system is now polluted. Waterways that were once sources of pleasure and beauty and recreation are forbidden to human contact and objectionable to sight and smell. Furthermore, this pollution is costly, requiring expensive treatment for drinking water and inhibiting the operation and growth of industry.

In spite of the efforts and many accomplishments of the past, water pollution is spreading. And new kinds of problems are being added to the old:

--Waterborne viruses, particularly hepatitis, are replacing typhoid fever as a significant health hazard.

--Mass deaths of fish have occurred in rivers over-burdened with wastes.

--Some of our rivers contain chemicals which, in concentrated form, produce abnormalities in animals.

--Last summer 2,600 square miles of Lake Erie--over a quarter of the entire Lake-were almost without oxygen and unable to support life because of algae and plant growths, fed by pollution from cities and farms.

In many older cities storm drains and sanitary sewers are interconnected. As a result, mixtures of storm water and sanitary waste overflow during rains and discharge directly into streams, bypassing treatment works and causing heavy pollution.

In addition to our air and water we must, each and every day, dispose of a half billion pounds of solid waste. These wastes--from discarded cans to discarded automobiles-litter our country, harbor vermin, and menace our health. Inefficient and improper methods of disposal increase pollution of our air and streams.

Almost all these wastes and pollutions are the result of activities carried on for the benefit of man. A prime national goal must be an environment that is pleasing to the senses and healthy to live in.

Our Government is already doing much in this field. We have made significant progress. But more must be done.

Federal Government Activity

I am directing the heads of all agencies to improve measures to abate pollution caused by direct agency operation, contracts and cooperative agreements. Federal procurement practices must make sure that the Government equipment uses the most effective techniques for controlling pollution. The Administrator of General Services has already taken steps to assure that motor vehicles purchased by the Federal Government meet minimum standards of exhaust quality.

Clean Water

Enforcement authority must be strengthened to provide positive controls over the discharge of pollutants into our interstate or navigable waters. I recommend enactment of legislation to:

--Provide, through the setting of effective water quality standards, combined with a swift and effective enforcement procedure, a national program to prevent water pollution at its source rather than attempting to cure pollution after it occurs.

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--Increase project grant ceilings and provide additional incentives for multi-municipal projects under the waste treatment facilities construction program.

--Increase the ceilings for grants to State water pollution control programs.

--Provide a new research, and demonstration construction program leading to the solution of problems caused by the mixing of storm water runoff and sanitary wastes.

The Secretary of Health, Education, and Welfare will undertake an intensive program to dean up the Nation's most polluted rivers. With the cooperation of States and cities--using the tools of regulation, grant and incentives--we can bring the most serious problem of river pollution under control. We cannot afford to do less.

We will work with Canada to develop a pollution control program for the Great Lakes and other border waters.

Through an expanded program carried on by the Departments of Health, Education, and Welfare and Interior, we will continue to seek effective and economical methods for controlling pollution from acid mine drainage.

To improve the quality of our waters will require the fullest cooperation of our State and local governments. Working together, we can and will preserve and increase one of our most valuable national resources--clean water.

Clean Air

The enactment of the Clean Air Act in December of 1963 represented a long step forward in our ability to understand and control the difficult problem of air pollution. The 1966 Budget request of 24 million dollars is almost double the amount spent on air pollution programs in the year prior to its enactment.

In addition, the Clean Air Act should be improved to permit the Secretary of Health, Education, and Welfare to investigate potential air pollution problems before pollution happens, rather than having to wait until the damage occurs, as is now the case, and to make recommendations leading to the prevention of such pollution.

One of the principal unchecked sources of air pollution is the automobile. I intend to institute discussions with industry officials and other interested groups leading to an effective elimination or substantial reduction of pollution from liquid fueled motor vehicles.

Solid Wastes

Continuing technological progress and improvement in methods of manufacture, packaging and marketing of consumer products has resulted in an ever mounting increase of discarded material. We need to seek better solutions to the disposal of these wastes. I recommend legislation to:

--Assist the States in developing comprehensive programs for some forms of solid waste disposal.

--Provide for research and demonstration projects leading to more effective methods for disposing of or salvaging solid wastes.

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--Launch a concentrated attack on the accumulation of junk cars by increasing research in the Department of the Interior leading to use of metal from scrap cars where promising leads already exist.

Pesticides

Pesticides may affect living organisms wherever they occur.

In order that we may better understand the effects of these compounds, I have included increased funds in the budget for use by the Secretaries of Agriculture, Interior, and Health, Education, and Welfare to increase their research efforts on pesticides so they can give special attention to the flow of pesticides through the environment; study the means by which pesticides break down and disappear in nature; and to keep a constant check on the level of pesticides in our water, air, soil and food supply.

I am recommending additional funds for the Secretary of Agriculture to reduce contamination from toxic chemicals through intensified research, regulatory control, and educational programs.

The Secretary of Agriculture will soon submit legislation to tighten control over the manufacture and use of agricultural chemicals, including licensing and factory inspection of manufacturers, clearly placing the burden of proof of safety on the proponent of the chemical rather than on the Government. Research Resources

Our needs for new knowledge and increasing application of existing knowledge demand a greater supply of trained manpower and research resources.

A National Center for Environmental Health Sciences is being planned as a focal point for health research in this field. In addition, the 1966 budget includes funds for the establishment of university institutes to conduct research and training in environmental pollution problems.

Legislation recommended in my message on health has been introduced to increase Federal support for specialized research facilities of a national or regional character. This proposal, aimed at health research needs generally, would assist in the solution of environmental health problems and I urge its passage.

We need legislation to provide to the Departments of Agriculture and the Interior authority for grants for research in environmental pollution control in their areas of responsibility. I have asked the Secretary of Interior to submit legislation to eliminate the ceiling on pesticide research.

Other Efforts

In addition to these needed actions, other proposals are undergoing active study.

I have directed the Chairman of the Council of Economic Advisers, with the appropriate departments, to study the use of economic incentives as a technique to stimulate pollution prevention and abatement, and to recommend actions or legislation, if needed.

I have instructed the Director of the Bureau of the Budget and the Director of the Office of Science and Technology to explore the adequacy of the present organization of pollution control and research activities.

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I have also asked the Director of the Office of Science and Technology and the Director of the Bureau of the Budget to recommend the best way in which the Federal government may direct efforts toward advancing our scientific understanding of natural plant and animal communities and their interaction with man and his activities.

The actions and proposals recommended in this message will take us a long way toward immediate reversal of the increase of pollutants in our environment. They will also give us time until new basic knowledge and trained manpower provide opportunities for more dramatic gains in the future.

WHITE HOUSE CONFERENCE I intend to call a White House Conference on Natural Beauty to meet in mid-May of this year. Its chairman will be Mr. Laurance Rockefeller.

It is my hope that this Conference will produce new ideas and approaches for enhancing the beauty of America. Its scope will not be restricted to federal action. It will look for ways to help and encourage state and local governments, institutions and private citizens, in their own efforts. It can serve as a focal point for the large campaign of public education which is needed to alert Americans to the danger to their natural heritage and to the need for action.

In addition to other subjects which this Conference will consider, I recommend the following subjects for discussion in depth:

--Automobile junkyards. I am convinced that analysis of the technology and economics can help produce a creative solution to this vexing problem. The Bureau of Mines of the Interior Department can contribute technical advice to the conference, as can the scrap industry and the steel industry.

--Underground installation of utility transmission lines. Further research is badly needed to enable us to cope with this problem.

--The greatest single force that shapes the American landscape is private economic development. Our taxation policies should not penalize or discourage conservation and the preservation of beauty.

--Ways in which the Federal Government can, through information and technical assistance, help communities and states in their own programs of natural beauty.

--The possibilities of a national tree planting program carried on by government at every level, and private groups and citizens.

CONCLUSION In my thirty-three years of public life I have seen the American system move to conserve the natural and human resources of our land.

TVA transformed an entire region that was "depressed." The rural electrification cooperatives brought electricity to lighten the burdens of rural America. We have seen the forests replanted by the CCC's, and watched Gifford Pinchot's sustained yield concept take hold on forestlands.

It is true that we have often been careless with our natural bounty. At times we have paid a heavy price for this neglect. But once our people were aroused to the danger, we have acted to preserve our resources for the enrichment of our country and the enjoyment of future generations.

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The beauty of our land is a natural resource. Its preservation is linked to the inner prosperity of the human spirit.

The tradition of our past is equal to today's threat to that beauty. Our land will be attractive tomorrow only if we organize for action and rebuild and reclaim the beauty we inherited. Our stewardship will be judged by the foresight with which we carry out these programs. We must rescue our cities and countryside from blight with the same purpose and vigor with which, in other areas, we moved to save the forests and the soil.

LYNDON B. JOHNSON

The White House

February 8, 1965
Note: Plans for a White House Conference on Natural Beauty to be held May 24-25 in Washington were announced by the President on March 12 following a meeting with Laurance S. Rockefeller, Conference Chairman. In a White House release of that date the President stated that the a-day conference would concentrate on "concrete, immediate means for the preservation of natural beauty, through Federal, State, local, and private action."

"It is my hope and expectation," the President said, "that this Conference will help stimulate and guide a truly national effort--at every level of American life--to ensure that all our people can find their lives enriched by the beauty of the world they live in."

The release noted that Mrs. Johnson would open the Conference and that the President would make the closing address (see Item 277)- More than 800 conferees from private and public life would discuss "a wide range of topics concerning the effort to protect and extend the natural beauty of America." These topics, listed in the release, would be considered by panels composed of citizens, technical experts, representatives of industry and labor, and Government officials. Their recommendations would be presented to the President at the final session of the Conference.

Later, on May 7, the President announced the names of the chairmen of the 15 panels that would make up the Conference, and on May 18, the names of the 116 persons who had been invited to participate as panelists.

For statements or remarks upon signing related legislation, see Items 521, 543, 568, 576.
Lyndon B. Johnson, Special Message to the Congress on Conservation and Restoration of Natural Beauty. Online by Gerhard Peters and John T. Woolley, The American Presidency Project https://www.presidency.ucsb.edu/node/241332

Annex 10

Climatic Effects of Pollutants

The greatest consequences of air pollution for man's continued life on the earth are its effects on the earth's climate. They are also probably the least well known of all important effects.

Three kinds of effects have received the greatest attention: (1) the effects of increasing carbon dioxide due to the burning of fossil fuels; (2) the effects of increased particulates; and (3) the possible effects of moisture deposition by high-flying aircraft—such as supersonic transports.

We know the rate of increase of atmospheric carbon dioxide with reasonable accuracy. (About one-half the carbon dioxide formed by burning fossil fuels moves into the oceans and into plants, leaving the other half in the atmosphere.)

We remain regrettably ignorant of the size—and even the direction—of the corresponding effect on our climate. If we consider only the trapping effect on the earth's outward radiation, the earth should warm. If we consider only the effect on the meridional circulation, the earth should cool. It may well be that the net effect depends on the—still conjectural—effect on the pattern of the easterly and westerly circulations.

In the case of particulates, our uncertainty is less. It is probable that increased particulates so much increase the reflection of incoming sunlight as to outweigh all other effects and produce a net cooling. We are not sufficiently sure of either the magnitude or the effect or of the consequences of adding this cooling to the other on-going effects.

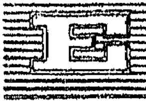
So far as the average temperature of the earth's northern hemisphere goes, it is clear that the decades before 1945 saw a rather steady warming, while those since have seen a cooling. The contribution of carbon dioxide from the combustion of fossil fuel and from added particulates to either trend—or to the maximum—is quite uncertain.

Stratospheric Air Pollution

The highest layers of the atmosphere lying above the clouds are cleansed only every few years in contrast to a cleansing every three or four weeks of the layer where rain occurs.

Particulate matter put in the stratosphere by volcanic eruptions has been observed to reduce substantially the sunlight reaching the earth's surface. The eruption of the Balinese volcano Mt. Aguna in 1963 reduced the solar heat input in the lower half of the Northern hemisphere by about ten to fifteen percent for a year or more and over the entire earth for the

Annex 11



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QUESTION OF CONVENING AN INTERNATIONAL CONFERENCE ON PROBLEMS OF THE HUMAN ENVIRONMENT

Activities of United Nations Organizations and Programmes relevant to the Human Environment

Report of the Secretary-General

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INTRODUCTION

1. When the Economic and Social Council at its forty-fourth session discussed the provisional agenda for its forty-fifth session, it was decided to include an item entitled "Question of Convening an International Conference on Problems of the Human Environment" proposed by Sweden (E/4466/Add.1). In order to facilitate discussion of the Swedish proposal, the Secretariat agreed to prepare a short paper outlining in a preliminary way certain aspects of the work of United Nations organizations and programmes relevant to the human environment. Such information on the subject as was readily available is contained in the present report.

2. In preparing this document it has been difficult to determine the extent of the areas which it should cover, as the Swedish proposal has been formulated in general terms. It will, of course, be necessary at an appropriate stage to define the exact limits which the proposed conference would cover and the emphasis to be given to the various aspects involved, scientific, social, etc. In the meantime, an attempt has been made to cover in a broad way the work of the United Nations organizations and programmes which would be relevant to problems of the human environment.

3. In view of the short time available for preparing the present report, it was not possible to cover fully all relevant aspects of the work of all organizations and programmes that might be concerned. Nor does the respective length of the passages devoted to each organization or programme in the present report always correspond to the actual importance of its work in this field. Generally, emphasis has been put on work programmes concerned with pollution of the human environment, this being an aspect of the subject-matter outlined in the Swedish memorandum which has up to the present time concerned United Nations organizations and programmes more than others.

4. However, in the Swedish memorandum stress is also laid on another important aspect of the problem of human environment, that is the impact on man himself of the process of change by technological advances. As is stated in the memorandum, this relates to problems of health, working and living conditions as influenced by unplanned and uncontrolled urban growth. Both physical and psychological effects will arise, as mushrooming shanty-towns and other types of slum areas, as well as rapid urban growth, cause not only air pollution and traffic congestion, a damaging level of noise, and sharply increased accident rates, but also problems connected with family disorganization, mental tensions and increased crime rates. In this report available information has therefore been included on activities relevant to this aspect of the environment problem.

5. As is shown in the body of the present report, there exists a great variety of continuing activities within the United Nations system of organizations which have a direct bearing on problems related to the human environment.

6. As concerns the natural surroundings of man, UNESCO has prepared, in co-operation with FAO, a study on conservation and rational use of the environment, which was submitted to the Council at its forty-fourth session (E/4458). In co-operation with other members of the United Nations family, particularly the United Nations, FAO, WHO and WMO, UNESCO is organizing a Conference on the Rational Use and Conservation of the Resources of the Biosphere, to be held in Paris in September 1968. The Economic Commission for Europe has decided to hold, in 1970/71, a Meeting of Governmental Experts on Problems relating to Environment, which is to concentrate on problems of governmental policies influencing environment and which is to be prepared in full co-operation with the secretariats of international organizations concerned. Pollution of the environment, air, water and soil, from different sources, is dealt with by the ILO, FAO, UNESCO, WHO, WMO, IAEA and, on the regional level, ECE. Pollution of the sea caused by ships

is the concern of IMCO. Pollution caused by radiation is the concern of IAEA, UNSCEAR, WHO and FAO. The proper and rational use of land, including problems of soil erosion, soil conservation and the establishment and protection of forests, is being studied particularly by FAO.

7. As for the man-made environment and the harmful effect on man and his working and living conditions, of changes caused by technological advances, as well as unplanned and uncontrolled urban growth, activities are carried on by the United Nations and by specialized agencies such as the ILO, UNESCO and WHO. The United Nations, including ECE, is concerned with the rational use of urban land, with urban development planning and with social aspects of industrialization and urbanization. WMO is actively studying the question of urban climate. Problems of health in connexion with uncontrolled urban development are given close attention by WHO. The ILO is dealing with the problem of atmospheric pollution of the working environment. The establishment of standards of safety against radioactive pollution caused by nuclear plants and establishments is the responsibility of IAEA.

8. Because of the complexity and interdisciplinary nature of many of the activities of United Nations organizations in connexion with the human environment, many of these programmes have an interagency character. In addition to the ad hoc and bilateral co-ordination of specific projects, the Administrative Committee on Co-ordination has already concerned itself with various aspects of the question. For example, co-ordination in respect of work on marine pollution has for the past few years been a major subject of study through the ACC Sub-Committee on Marine Science and its Applications; an ACC inter-agency meeting on environmental pollution was held early in 1968; and the ACC has commented on various aspects of the problem in its report to the Council (E/4486, paras. 54-56).

9. More detailed information on the activities of United Nations organizations and programmes in respect of the human environment is given below on an agency-by-agency basis.

I. UNITED NATIONS

Department of Economic and Social Affairs of the United Nations Secretariat

10. Three parts of the Department are particularly concerned with problems of the environment: the Office of the Director for Science and Technology, the Social Development Division, and the Centre for Housing, Building and Planning.

11. The Office of the Director for Science and Technology services the Advisory Committee on the Application of Science and Technology to Development, the Science Advisory Committee and the ACC Sub-Committee on Science and Technology. It acts within the Secretariat as a focal point for questions relating to science and technology. The work of the Office covers a number of specific aspects concerned with the human environment. The Advisory Committee is at present engaged in preparing a report on the development and rational utilization of natural resources which, it is intended, should provide Governments of developing countries with guidelines for the development of their natural resources. The Office is also involved in the preliminary planning of the Conference on a Scientific Basis for the Rational Use and Conservation of the Resources of the Biosphere.

12. In addition, the current work of the Advisory Committee and the Office of the Director for Science and Technology in drawing up the World Plan of Action for the Application of Science and Technology to Development which, it is intended, should be integrated with the plans for the Second United Nations Development Decade, is intimately connected with many aspects of the human environment.

13. The present work programme of the Division for Social Development reflects the concern felt for the effect on man of his surroundings. Mention should be made of the following parts of the work programme.

(a) Social aspects of industrialization. A concerted programme on the social aspects of industrialization, prepared in co-operation with UNIDO and the specialized agencies concerned, was submitted to the Commission for Social Development at its nineteenth session in February 1968 which approved it and to the Industrial Development Board at its second session in April/May 1968. The

advisory services to countries included in the programme relate *inter alia* to social factors, problems and policies in connexion with the establishment of large-scale projects; advising as to the social consequences of particular industrial projects as well as making available knowledge of social consequences of industrialization in general and/or of particular types of industrial projects. Interrelated with the advisory services general and specific studies will be undertaken on social preconditions, obstacles and consequences of industrialization. The effects on man of harmful changes in the natural surroundings caused by industrialization would seem to fall naturally within the framework of this programme.

(b) Social aspects of urbanization. In relation to urbanization urban growth and urban development, insufficient resources have so far prevented a follow-up on the interregional seminar on development policies and planning in this field held in Pittsburgh (United States of America) in the autumn of 1966.[1/] The first issue of the *International Social Development Review*, to be published in 1968, will, however, deal with questions of distribution of population and urbanization policies.

(c) Research-training programme for regional development. This long-term programme, having just entered its operation phase, is expected to provide and distribute valuable information on planning and policies for the development of regions within countries, including a more balanced rural-urban development and taking into consideration the need for and feasibility of urban and industrial decentralization.

(d) Development and utilization of human resources. Following up a first report on this subject, which was submitted to the Council at its forty-third session (E/4353 and Add.1) and ECOSOC resolution 1274 (XLIII) a second report prepared

1/ The report of the seminar was issued as document ST/TAO/SER.C/97.

in close co-operation with the specialized agencies concerned (E/4483) has been submitted to the present session of the Council, containing an examination of the proposals set out in the first report and of the priorities to be established among them. Within the framework of future activities in this field by the United Nations family of organizations attention can be expected to be given to harmful effects on man of changes in his environment.

(e) Social welfare programmes for families, communities and special groups. Different on-going projects in this field within the context of national development are intended to aim at, among other things, counteracting problems arising out of unplanned and uncontrolled urban growth, such as family dislocation, difficulties of adaptation to urban life, and subsequent appearing mental tensions and increased crime rates.

14. The main objective of the Centre for Housing, Building and Planning is to assist in bettering the human environment through the improvement of dwellings and related facilities as well as neighbourhoods in towns and villages, and through rationally organized urban areas and regions, permitting the individual and the society to carry out their tasks smoothly, efficiently and comfortably. The housing design and city planning activities of the Centre are directly related to problems of noise, traffic, radiation, recreation areas, waste disposal, and air and water pollution.

15. Amongst the studies and publications of the Centre just completed or under way bearing on the human environment are the following: (a) urban land policy and land control measures, being detailed surveys of a selected number of countries; (b) demonstration and pilot projects aimed at the improvement of living conditions in squatter settlements and slums in urban and rural areas; (c) policies, programming and administration in the fields of housing, building and planning; (d) development of traditional building methods which will facilitate better, faster and cheaper construction of dwellings; (e) industrialization of building, with reference to construction techniques for seismic and hurricane areas; (f) low-cost house design in relation to climate; (g) social aspects of housing, including case studies on relevant experience from various regions; (h) planning metropolitan areas and towns; (i) rural housing and community facilities; (j) methods for establishing targets and standards for housing and environmental development.

16. It may also be appropriate to recall Council resolution 1300(XLIV) recommending an examination of the possibilities of convening regional conferences and/or initiating a programme of public information in the field of housing, building and planning, within the context of the desirability of designating an international year for housing and urban and rural development during the next United Nations Development Decade. The resolution also requested the Secretary-General to ascertain the views of Member States on these matters; the report of the Secretary-General should be before the Council in the spring of 1970.

Economic Commission for Europe

17. Pursuant to Commission resolution 5 (XXII) and its decision C (XXIII), an ECE Meeting of Governmental Experts on Problems relating to Environment will be convened at the invitation of the Government of Czechoslovakia in that country in 1970 or 1971. A Preparatory Group of Experts on Environment will meet in Geneva in February 1969 to draft the provisional agenda of the meeting and to agree on the methods of the preparation for, as well as the scope and organization of, this Meeting, including the arrangements for the participation and contribution of the secretariats of all international organizations concerned. It is expected that the ECE Meeting will concentrate on practical aspects of economic policy problems facing Governments in relation to the influence on environment of measures taken to promote economic growth and to ensure an increase in the standard of living.

18. The Commission, operating within its terms of reference, has carried out intensive pollution abatement programmes, particularly emphasizing policy problems facing Governments and industries and prevention at the source. While programmes in particular sectors are implemented by its Committees on Transport, Steel, Housing, Coal, Gas and Electric Power, the Commission has established a subsidiary organ on water resources and water pollution control problems and has undertaken special comprehensive programmes on air pollution and on the socio-economic influence of environment.

19. Some of the more important past activities concerning pollution of inland waters include the adoption of an ECE Declaration of Policy on Water Pollution Control (resolution 10 (XXII)), a study of economic aspects of treatment and disposal of certain industrial effluents[2/] and a survey of the prevention of water pollution by detergents (E/ECE/600/Add.1, E/ECE/673 and WATER POLL/GEN 5). Studies are in preparation on such subjects as water pollution by coking plants, by thermal power stations, by the iron and steel industry, by the underground storage of gas near water bearing beds for drinking water supplies.

20. In respect of air pollution the following studies have been completed: "Solid smokeless fuels" (ST/ECE/COAL/22), "Air pollution by coking plants" (ST/ECE/COAL/26) and "Protection of the atmosphere from pollution by fuel gases from thermal power stations" (ST/ECE/EP/23, vol. II). Studies are in preparation on the following subjects: methods of control for air pollution and regulations for maximum admissible levels of carbon monoxide with regard to exhaust gases from petrol engines, methods used in measuring the opacity of diesel engine exhaust gases, air pollution by chemical wastes of coking plants, problems of air pollution from thermal power stations, and air pollution in the iron and steel industry. Besides these sectoral activities carried out under the auspices of several ECE Committees, an _ad hoc_ Meeting of Governmental Officials on the Prevention of Air Pollution will be held in December 1968 with a view to adopting an ECE work programme in this field, including the study of governmental policies and formulation of appropriate recommendations.

21. Under the auspices of the Committee on Housing, Building and Planning extensive studies are being undertaken and seminars and symposia organized on such subjects as the housing situation and prospectives for long-term housing requirements, the planning and development of recreational areas and the development of the national environment, urban renewal, future patterns and forms of urban settlements, the quality of dwellings and housing areas, current trends and policies in the field of housing and building and planning.

2/ United Nations publication, Sales No.: 67.11.E/MIM.56

United Nations Scientific Committee on the Effects of Atomic Radiation

22. The Scientific Committee on the Effects of Atomic Radiation established in 1955 under General Assembly resolution 913 (X) receives, assembles and evaluates reports on observed levels of ionizing radiation and radio-activity in the environment, as well as reports on observations and experiments relevant to the effects of ionizing radiation upon man and his environment; it recommends uniform standards with respect to procedures for sample collection and instrumentation. Under General Assembly resolution 913 (X), specialized agencies are requested to concert with UNSCEAR concerning any work they might be doing or contemplating within the Committee's terms of reference.

23. Since its establishment, the Committee has published four technical reports to the General Assembly (A/3838, A/5216, A/5814 and A/6314) reviewing current levels of natural and man-made radiation in the environment (atmosphere, soil and oceans), in food chains and in human tissues, and assessing the attendant risks of deleterious effects in the exposed population and in future generations. In particular, these reports discussed in detail the problems associated with world-wide radioactive contamination by fall-out from nuclear tests. At various times, including this year, the Committee has made known to States member of the United Nations, of the specialized agencies and of the IAEA the type of information necessary for the assessment of radioactive fall-out.

24. The Committee is currently engaged in the preparation of a further survey of the fall-out situation and of radiation effects to be submitted to the General Assembly at its twenty-fourth session.

II. INTERNATIONAL LABOUR ORGANISATION

25. The ILO has constitutional obligations in respect of the protection of the worker against sickness, disease and injuries arising out of his employment. The over-all question of prevention of pollution in the working environment is consequently of its concern.

26. The more recent work carried out by the organisation has been focused on atmospheric control in mining operations. A comprehensive guide on the prevention and suppression of dust in mining, tunnelling and quarrying has been published and

reports on this subject based on government contributions are published at five yearly intervals. A set of recommendations have also been issued. Also in mining, the question of methane control is dealt with in a Code of Practice. As regards radon and radio-active dust control in uranium mining, the ILO, together with IAEA, have prepared a Code of Practice supplemented by a Technical Addendum.

27. The question of air pollution control in industrial establishments is dealt with in the ILO Model Code of Safety Regulations for Industrial Establishments for the Guidance of Governments and Industry. Also a Guide to Atmospheric Control in Foundries is being prepared. Further, in the framework of its technical co-operation programme, the ILO organized in 1965 (in collaboration with Hungarian trade-unions) an interregional course on dust prevention in industry.

28. As regards standard-setting in relation to the over-all question of atmospheric pollution control of the working environment, the ILO is examining the opportunity of preparing one or more international instruments (convention and/or recommendation).

29. The International Occupational Safety and Health Information Centre (CIS), which operates in the framework of the ILO, is disseminating information in the form of abstracts, received from more than thirty national centres, on publications and other material dealing with air pollution questions.

30. The ILO is in permanent touch with the international organizations working in the field of prevention of atmospheric pollution of the workplace.

31. The ILO is thus in a position to contribute actively to the promotion of atmospheric pollution control in the working environment. The technical measures applicable to this environment may further lead to a reduction in the release of dangerous pollutants in the general atmosphere, to the benefit of the whole community.

III. FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

32. FAO is involved in many ways in the problems of human environment. One of its major fields of concern in this regard is pollution. FAO's interests, which relate primarily to the effect of pollution on food, animal and plant production, fisheries and marine and forest products are at present centred on water pollution - both inland and marine - with respect to research, prevention, control and amelioration, although they clearly extend to air and soil pollution also.

33. In the field of inland water pollution FAO is undertaking studies on water quality criteria for fish in some cases through its regional fisheries councils and commissions, as well as on pesticides and pollution, on pulp and paper mill effluents, and on the use of sewage effluents for agriculture, forestry and fisheries.

34. With respect to marine pollution, the initiative to develop a concerted interagency programme was taken three years ago through the ACC Sub-Committee on Marine Science and its Applications. This followed requests by some member countries for an active programme with respect to problems of increasing concern in some areas and general consideration of these problems by FAO's Advisory Committee on Marine Resources Research (ACMRR). The ACMRR encouraged UNESCO's Inter-Governmental Oceanographic Commission, to which it is an advisory body, to sponsor oceanographic studies relevant to pollution monitoring and control. FAO has itself begun to prepare for a technical conference on marine pollution and its effects on fishery resources and fishing to be held in Rome in 1969 and for which the co-operation of other international organizations has been invited. It should be added that FAO, UNESCO and IMCO are in the final stage of establishing a joint committee of experts on the scientific aspects of marine pollution. This joint committee will be advisory to the three sponsoring organizations, as well as to other agencies that may join in its sponsorship, and the ACC.

35. It should also be mentioned that there is generally greater competition today for the use of available water areas as evidenced for example by the reclamation of estuaries, lagoons and marshes, a diminished flow in rivers and lowered lake levels, which brings about profound changes in the aquatic environment. Many of these changes are deleterious to fisheries and hence must be considered as contributing to the deterioration of man's environment.

36. FAO has also a growing interest in the extension of the human environment to include not merely the sea surface, but the ocean depths and the sea bed also. Scientific and technological development now occurring is expected to have very important long-term effects on man's ability to use the oceans as a source of food and other organic products. These developments will, on the one hand, affect the environment itself and, on the other, effect greatly the lives of communities which traditionally look to the sea for their livelihood.

Water management and water use

37. Uncontrolled water management and water use has had very serious effects on man's environment. To give only a few examples, wrongly conceived river management has sometimes altered, wholly or in part, the hydrological and sedimentation characteristics of river catchments; over-draining of land or unctrolled reclamation of swamps have made land unsuitable for agriculture, increased erosion and even sometimes led to a change in climate. On the other hand, the absence of drainage has led to waterlogging and salinity of irrigated land.

38. It is part of FAO's work to assist Governments in arresting such adverse changes in man's environment and to keep under permanent review the related problems. It should be added that FAO's work includes co-operation with other United Nations and international bodies active in the water field.

39. FAO also assists Member Governments by organizing seminars and training centres, amongst which the Seminar on Waterlogging in relation to Irrigation and Salinity Problems (Lahore, 1964) and the Land and Water Use Seminar for the Near East (Beirut, 1967) should be mentioned.

Animal Industries

40. Water as well as air pollution may also be ascribable to activities relating to animal industries. Indeed slaughterhouses and dairy effluents may contribute to water pollution just as evaporation from rendering plants and similar establishments may cause air pollution. There are however several other ways in which animal industries may adversely affect the environment: for instance, overgrazing may

destroy pastures; diseased or dead animals may pollute the environment and so on. FAO endeavours to counteract these advserse effects, through advisory activities in its various field programmes, dissemination of information and fostering international or regional agreements.

41. FAO also concerns itself, in particular through its joint FAO/IAEA Division, with the problems of the accumulation of radioactive fall-out in the food chain as a result of which certain animal products may become unsuitable for human consumption. Similar problems arise with the accumulation, in animal products, of certain pesticides used against plant pests, these problems are dealt with in co-operation with the relevant FAO/WHO Expert Committee.

Pesticides

42. FAO has in the field of pesticides an extensive programme which is designed to ensure the safe and effective use of pesticides by Member Governments, with due consideration being given to the advserse effects of these compounds upon users and beneficial forms of life. This programme aims, inter alia, at reducing the "excessive and uncontrolled use of biocides" mentioned in the Swedish delegation's explanatory memorandum. A publication entitled "Guide-line for the drafting of legislation for the registration for marketing and sale of pesticides" is under issue.

43. Other problems receiving continuous attention are pesticides residues and pest resistance to pesticides.

Land

44. Land is a basic component of the human environment and its proper use is obviously of primary importance. Mismanagement of land includes inter alia, overgrazing, uncontrolled clearing of forest vegetation and poor cultivation techniques. The widespread practice of shifting cultivation is being studied in a number of field projects, and is the subject of a forthcoming publication.

45. The problem of marginal land deterioration, and possible permanent loss of its production and protective potential, is of growing importance, both adjacent to advancing deserts and at high altitudes. Possible uses and methods of stabilizing such lands are being studied by FAO.

46. Afforestation is a major means of controlling soil erosion, reducing floods and increasing the production of wood. FAO has issued a number of publications dealing with quick-growing species and desirable planting techniques. In addition a symposium was recently organized in the Soviet Union on shelterbelts, which are essential for agriculture in some regions.

47. The problem of soil erosion and of saline/sodic soils will continue to receive attention. A technical conference on soil conservation with "on the site" training in methods of controlling soil erosion is planned to be held in Autumn 1969.

48. The establishment and protection of forests is one of man's best tools for creating a stable and productive plant environment. Through publications and seminars, through field experts in forest departments, universities and ranger schools, FAO endeavours to establish modern silvicultural practices in many developing countries. Bringing about sound pollution control practices in forest industries also deserves to be stated.

Legislation

49. Finally, FAO's interest in the problems of human environment extends to legislation. Its activities in this regard consist (a) in drafting legislation and commenting on draft legislation in fields such as water resources for agricultural purposes, soil conservation, land reform and land settlement, conservation of renewable natural resources, national parks and nature reserves, and water pollution control, and (b) in preparing comparative studies and working papers. Recently these have dealt with the following matters:

Legislation on land use planning in Europe, 1966, and Supplement, 1968;

Legislative and administrative provisions in European Countries to ensure proper distribution of water resources, 1968;

Wildlife legislation and policy in Africa, 1965;

National legislation and policy on water pollution control, 1968.

50. With a view to exchanging information and avoiding duplication, FAO collaborates closely with other agencies and bodies active in these various fields. Particular mention may be made of its co-operation with UNESCO, WHO, IMCO, ECE and the Council of Europe.

IV. UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

51. UNESCO has from the beginning conducted or stimulated important activities relating to the scientific problems of the environment and to the conservation of natural resources. These activities have developed along the years with such landmarks as the Arid Zone Research Programme, the Humid Tropics Research Programme, and the creation of a Natural Resources Research Division with a section for ecology and conservation.

52. UNESCO is concerned with scientific aspects of pollution in relation to its research and training programmes in marine science, hydrology and ecology. It is also increasingly concerned with the scientific, cultural and ethical aspects of deterioration of the total environment and of its relationships with man.

Marine Science.

53. The UNESCO Programme in marine science is conducted by the Office of Oceanography which also serves as secretariat for the Intergovernmental Oceanographic Commission (IOC). The UNESCO programme is concerned with basic oceanic research and associated scientific work throughout the world. The IOC has responsibility for organizing co-operative scientific research in the ocean and maintaining through World Data Centres the international exchange of oceanographic data. One of the new programmes concerns *inter alia* the development of an Integrated Global Ocean Station System for monitoring the ocean environment.

Hydrology.

54. A major undertaking of UNESCO relevant to the environment in relation to man is the International Hydrological Decade (IHD). The programme of the Decade constitutes a concerted international effort to promote the study of the world's water resources and to intensify research in scientific hydrology encompassing all the phases of the hydrological cycle. This ten-years programme started in 1965. It is directed by Co-ordinating Council with 21 Member Countries and representatives from all UN Organizations concerned. A mid-decade intergovernmental Conference will be convened by UNESCO in 1969 to review progress made and provide guidance for the second half of the IHD.

Ecology.

55. UNESCO's natural resources research programme, which is directed by an International Advisory Committee, includes promotion of international action including support to the International Biological Programme through subventions and joint projects, promotion of research projects, including organization of scientific meetings and symposia, development of educational and training activities, and creation or strengthening of research and training facilities in the Member States. This programme is strongly dominated by an ecological and integrated approach to the study of the environment, as exemplified by the creation of interdisciplinary natural resources research and training institutions or by the organization of training centres for integrated surveys of the environment.

Conservation.

56. Besides continued support to the International Union for Conservation of Nature, UNESCO has always been concerned with conservation of natural resources such as soils, waters, flora and fauna and assists governments in taking appropriate steps to this effect, including through research and education activities, establishment of national parks and nature reserves and setting up of appropriate structures such as conservation boards.

57. UNESCO has prepared in co-operation with FAO, the report on Conservation and Rational Use of the Environment (E/4458) for the forty-fourth session of the Economic and Social Council. This report, which is to be considered by ECOSOC at a later session, contains important background material and recommendations for action in this field at the national and international level.

Social Sciences

58. The integrated approach to environmental and natural resources research which is mentioned above in relation to ecology implies in most cases a social sciences component. In addition, UNESCO has included in its social sciences programme since 1966 a long-term project on the theme "Man and his environment - design for living". This constitutes a multidisciplinary approach towards determining the most effective means of achieving a design for living that would encourage the pursuit of beauty and the enhancement of dignity in human relationships - particularly in urban environments. An interdisciplinary symposium on this subject, with participation of architects, city planners, social scientists and philosophers is planned for 1970.

The Biosphere Conference

59. An Intergovernmental Conference on the Scientific Basis for Rational Use and Conservation of the Resources of the Biosphere will be convened by UNESCO from 4 to 13 September 1968 with the participation of the United Nations, FAO and WHO and the co-operation of IUCN and IBP. This Conference is expected to constitute a major step forward in formulating proposals for action at the national and international levels in this broad field, which proposals should provide a firm scientific and conceptual basis for any further action in the UN system.

60. The conference has been prepared by a Preparatory Committee consisting in representatives of the participating and co-operating organizations. A number of working documents summarizing the state of knowledge and major problems in the main sectors of rational use and conservation - including pollution - of the resources of the biosphere (terrestrial and fresh-water environments) have been prepared. In addition, Member States have been invited to present national reports, and the ECOSOC report on Conservation and Rational Use of the Environment (E/4458) mentioned above will constitute a background document for the Conference. Three main commissions dealing respectively with research, with education and with scientific policy and structures, are foreseen,

Future trends

61. Throughout the world, ecology and conservation are being given high priorities by many member countries which recognize national and international shortcomings in these fields, and are demanding action. This places a heavy responsibility on UNESCO which has particular obligations in these fields because it is becoming increasingly clear that development programmes must be structured on the basis of sound ecological principles and that there is no rational use without conservation. For those reasons, and particularly after the Biosphere Conference, UNESCO is likely to be called upon to develop an enlarged programme of activities. Such a programme will continue to involve promotion of international action, scientific meetings, seminars, training courses, creation and strengthening of institutions, etc., particularly in those areas that demand an interdisciplinary approach. Missions dealing with problems connected with natural resources research planning and better knowledge of the basic ecological factors leading to possible applications for increased productivity and more rational use of biological resources will be developed. Applied ecological studies leading to

the establishment of national parks, site protection, biological preserves, etc. will be strengthened. The preservation of the fauna and flora and the maintenance of botanical and zoological collections will also be encouraged, either directly or through appropriate national and international organizations. This scientific and educational programme will increasingly call upon the contribution of social sciences and will be supplemented by stronger UNDP activities in developing Member States.

62. In all those activities, and in co-operation with all organizations concerned, UNESCO will particularly promote action in natural geographical areas, such as river basins or large-scale ecological zones distributed throughout the world. Combining this information with that obtained by other institutions, knowledge over a wide array of ecological conditions should provide a scientific basis for development plans ensuring the rational use of the resources of the biosphere.

V. WORLD HEALTH ORGANIZATION

63. The work of WHO relating to the human environment is concerned with the development of community water supplies; with environmental deficiencies that endanger health: air and water pollution control, sewage and solid wastes disposal, vector control; with health aspects of housing and physical planning; with radiation and occupational health and with problems of physical and mental health arising from the man-made environment. Practical assistance to Governments of Member States, the collection and dissemination of information, the determination of the research required and the stimulation and support of research are fundamentals - along with training - of the relevant health activities.

Provision of water supplies and water pollution control

64. WHO stimulates and promotes the provision of safe and adequate water supplies for both rural and urban areas and the establishment of international standards for drinking water quality. It is also concerned with the prevention or control of physical, chemical and biological pollution of fresh and coastal waters by municipal and industrial wastes. The Organization stimulates and supports research into waste treatment and utilization, and gives technical assistance to Member Governments for this purpose.

Pollution of air and soil

65. WHO has for a number of years studied and provided guidance on such questions as methods for measuring air pollution, the establishment of air quality criteria and guides, new approaches to the determination of short- and long-term effects of air pollution on health and technical and administrative measures for prevention and control. In 1967, to co-ordinate research efforts in this field, WHO established an International Reference Centre for Air Pollution in London, which will co-operate with regional and national institutions.

66. The organization is also concerned with soil pollution by biological agents and the prevention of soil-transmitted bacterial and parasitic diseases, as well as with problems arising from soil pollution by non-degradable substances such as wastes from the mining industry, persistent pesticides and radioactive material.

Environmental biology and vector control

67. WHO develops collaborative research and provides technical guidance on all phases of the biology, ecology and control of vector-borne diseases and on the resistance of vectors to insecticides. It also promotes studies on environmental pollution by pesticides and its long-term effects on man, and recommends measures for protection.

Environmental radiation and radiological health

68. In radiological health and environmental radiation control, WHO works in close collaboration with the IAEA, the United Nations Scientific Committee on the Effects of Atomic Radiation, and with other international organizations concerned. WHO collaborates with these agencies by participating in the work of various specialized groups dealing with radioactive pollution, in order to advise on health aspects. Its work relates to the disposal of radioactive wastes, the use of radioisotopes in sanitary engineering and environmental radioactivity from all other sources. WHO provides technical assistance with regard to some of these problems.

Industrial and urban environment

69. In close collaboration with ILO, WHO promotes and provides technical guidance on the development of occupational health services, ergonomics, industrial physiology and toxicology, and accident prevention in industry.

70. In order to prevent adverse effects from the rapid transition from the rural to the urban way of life, WHO provides guidance and assistance on the planning, organization and operation of sanitation and health services in urban communities, including the public health aspects of housing, transport, town-planning and urbanization in general - and on the organization of public health services. The latter work includes the planning and administration of community health services in which maternal and child health have an important place, and research and guidance on mental health including problems of drug-abuse and criminality.

VI WORLD METEOROLOGICAL ORGANIZATION

71. WMO, by one of its basic terms of reference, has to further the application of meteorology to all human activities and to the solution of human problems. As the atmosphere forms important part of the environment of man, application of meteorology to the steadily increasing problems of the human environment both nationally and internationally is within the purpose of the organization and is summarized below:

Planning the use of the environment

72. Planning for a most suitable use of land with regard to economic efficiency and human wellbeing for example for agricultural regions, industrial areas, urban settlements and resort areas calls for a collection of climatological data to be used for investigating where in view of the weather conditions different activities may most suitably be carried out. Hence meteorological services promote the collection and processing of data and WMO co-ordinates these activities through its Commission for Climatology.

73. Planning in agriculture is a field where efficiency may be promoted in a particularly high degree by making use both of climatological data and weather forecasting. WMO co-ordinates these national activities within its Commission for Agricultural Meteorology, and co-operates with FAO and UNESCO to promote improved planning of agricultural activities all over the world.

74. Similar planning activities are needed in relation to the use of water resources being closely related to phenomena such as precipitation and evaporation. Here WMO promotes studies and encourages standardization through its Commission for Hydrometeorolog presently in close co-operation with UNESCO.

75. WMO has noted a growing interest in making use of meteorological data in planning urban settlements and for building and other industries. Hence WMO will arrange a symposium in Brussels in October this year on Urban Climate and Building Climatology to discuss the promotion of these fields.

76. In planning activities it is essential to know to which extent the normal atmospheric conditions are stable. Hence the problem of changes of climate enters as an important issue which has to be considered, either the changes have been introduced by man or through atmospheric events. In most cases the modifications introduced by man are not deliberate, in some other they are and it is thought that in the future man may be able to influence upon weather and climate not only at a small scale but also over larger areas, WMO, through its Commission for Atmospheric Sciences of course follows closely the development in the fields of weather modification particularly in relation to artificial precipitation, prevention of evaporation etc.

77. Closely related to the question of changes of the environment's climate is the problem of long-range weather forecasting. Obviously planning the suitable use of the human environment would be much facilitated if weather forecasts for months and seasons would be available. No such reliable methods are as yet in existence but WMO through participation in global research projects and by the launching of the World Weather Watch (WWW) takes a very active part in promoting this aim.

Protecting the atmospheric environment

78. Application of meteorology to the protection of the atmosphere is mainly related to the problem of increasing air-pollution. There are large-scale air pollution problems where we are interested in global spread of debris from nuclear tests, the increase of acidity due to increased industrialization over a large part of the globe or the increase of the carbon-dioxide in the earth's atmosphere which may change our climate. In all these cases the general circulation of the atmosphere enters as the machinery. In the case of small scale problems we are interested in the spread of pollution from a single plant or over large urban communities due to central heating with carbon fuels or from heavy motor traffic; then the meteorological parameters of greatest interest are such as turbulence, stability and wind which govern the spread and concentration of pollutants.

79. It is the task of WMO to collect information and propose standardization on methods applied for use of meteorological theory together with suitable samples of data as well as in forecasting weather conditions that forms the concentration of air pollutants in planning communities and location of plants.

80. It is also the task of WMO to encourage Members to establish "background" stations in areas of low air-pollution in order to arrive at a suitable minimum standard to be applied in consideration of an overall regional or global increase of chemical components in the atmosphere.

81. These tasks are taken care of by a working group of six specialists established by the Commission for Atmospheric Sciences of WMO. Application of air-pollution problems in planning agriculture, urban communities and industry location is dealt with by the above-mentioned Commissions for Agricultural Meteorology and Climatology.

Protection against catastrophic weather events

82. The possibility of protecting the human settlements and man in all his activities against catastrophic weather events, of course, is a very important problem for WMO. Arriving at such a protection implies both a scientific research aspect where the meteorological behaviour of the phenomena such as tropical cyclones, tornadoes and floods is studied and an applied aspect where techniques to plan for the actual protection are invented. WMO takes an active part in promoting research as well as in establishing for example with support from UNDP, warning and other protection systems. The Co-ordination in this field is taken care of by the Commissions for Synoptic Meteorology and Maritime Meteorology. The possibilities for WMO to make even larger contributions in this connexion will be further improved by the implementation of WWW.

Human biometeorology

83. WMO through its Commission for Climatology promotes also the development of the meteorological field which is concerned with the interrelation between the conditions in the atmospheric environment and human health i.e. human biometeorology.

VII INTER-GOVERNMENTAL MARITIME CONSULTATIVE ORGANIZATION

84. In dealing with human environment, IMCO is solely responsible for the prevention of the pollution of the sea by ships. IMCO is depositary of the International Convention for the Prevention of Pollution of the Sea by Oil, the only international treaty on this matter. Following the loss of the "TORREY CANYON", IMCO embarked on an intensive programme of studies to formulate stricter international rules to prevent pollution of the sea by oil and other noxious and hazardous agents and to devise methods for taking action after such pollution has occurred.

85. Of the various items currently under study by IMCO, the following may be cited as typical of those touching the human environment:

modification of features of construction and equipment of ships aimed at limiting the risk of collision or stranding and avoiding or minimizing the escape into the sea, as a result of such accidents of oil or other hazardous or noxious cargoes;

routing merchant ships, separating traffic and establishing prohibited areas to be avoided by ships of certain classes and sizes;

additional requirements for training and certification of masters and officers;

new agents for absorbing or precipitating oil and new methods for removal of pollutants from the sea;

new chemical and mechanical agents for protecting coastal areas from pollution, including construction and use of booms, emulsifiers etc;

detection and penalization of deliberate marine pollution;

measures which States can take outside their territorial seas in self-protection against pollution;

liabilities arising from casualties involving discharge of oil or other pollutants;

international co-operation in official enquiries relating to ship casualties involving pollution;

the use of sea-borne salvage and anti-pollutant equipment flying the flag of one State within the territorial waters of another State; powers of surveillance and control by coastal States to implement measures for improving the safety of navigation and obviating maritime pollution.

86. The organization intends to convene, probably in 1969, the requisite conferences to adopt Conventions on both the private and public law aspects of the problems arising from the "TORREY CANYON", as well as amending or restating the provisions of existing conventions bearing on this matter.

87. In this work, IMCO maintains close co-operation with other specialized agencies of the United Nations, demonstrated, for example, by the fact that IMCO, FAO and UNESCO (IOC) have established a joint group of experts on the scientific aspects of marine pollution to advise sponsoring organizations on matters within their responsibilities. This joint group, open to any other UN agencies and which WMO has now joined, has been approved by ACC.

88. The question of co-ordination in the field of prevention of marine pollution is dealt with in the Report of the Secretary-General under agenda item 12: "Marine Science and Technology: Survey and proposals" and in particular in annex XIV to that report (E/4487).

VIII THE INTERNATIONAL ATOMIC ENERGY AGENCY

General

89. The IAEA has a continuing programme on all aspects of radioactive pollution caused by peaceful uses of atomic energy, in close co-operation with other international organizations, in particular the ILO, ECE, FAO, WHO, WMO, IMCO and ICRP. The programme consists of conferences, panels and other meetings to discuss technical and scientific problems; publications to disseminate information; support and co-ordination of research; advisory services to Member States upon their request and technical assistance to Member States, including various forms of training. It should, however, be stressed that the contribution of radioactive pollution to the environment is entirely negligible in comparison with all other kinds of pollution.

Radioactive air pollution

90. In 1967 the IAEA published a revised edition of its Basic Safety Standards and a report on risk evaluation for protection of the public in radiation accidents, prepared jointly with WHO. In the same year the IAEA held a symposium on the containing and siting of nuclear power plants, another one on air monitoring techniques, and a joint meeting with WMO on meteorological and nuclear establishments. In 1968, a travelling seminar on radiation monitoring, including air monitoring, was undertaken in Latin America and a symposium will be held on the treatment of airborne radioactive wastes in the United States of America.

91. The IAEA laboratory has analysed the radioactivity of air samples for several Member States and is in a position to advise governments and international organizations on the programming or air and precipitation monitoring schemes. It co-operates with WMO in this field and is represented in the WMO Commission on Instruments and Methods of Observation, where the IAEA representative was appointed Rapporteur on Measurements of Atmospheric Radioactivity.

The radioactive pollution of fresh and sea water

92. The releasing of low-level radioactive wastes into the sea is practised by a number of countries; certain other countries do not agree with this means of disposal.

93. The IAEA's activities are directed mainly to the study of standards of permissible concentration of released liquid wastes, methods of determination of radionuclides released into the sea and fresh water, water biota, etc.

94. The IAEA publishes a number of basic recommendations concerning radioactive water pollution problems.3/ Manuals concerning the methods of treatment of radioactive wastes have been prepared for use by those Member States which are developing nuclear establishments and the reports of panels on the treatment of radioactive wastes and the economics of waste management have been published. WHO is co-operating, where appropriate, in the revision of these Manuals.

3/ For example: Safety Series No.5 (1961), "Radioactive Waste Disposal into the Sea". Safety Series No.10 (1963), "Disposal of Radioactive Wastes into Fresh Water". Safety Series No.11 (1965), "Methods of Surveying and Monitoring Marine Radioactivity".

95. The newly elaborated programme of the IAEA Monaco Laboratory deals chiefly with the standardization of experimental techniques to study the effects of radioactivity in the marine environment.

The radioactive pollution of the ground

96. Radionuclides can enter the soil either directly by the introduction of liquid or gaseous wastes, or indirectly by way of infiltrating through the soil and leaching contaminants from the surface of solid waste.

97. Safe radioactive waste disposal into the ground is the subject of IAEA Safety Series No.15 (1965), in which recommendations are made as to the siting, behaviour of wastes in the ground and standards and control techniques and was discussed widely at the symposium held in 1967.

98. As the radioactive pollution of the ground allows the uptake of radionuclides by plants, methods of determination of radionuclides (resulting from fall-out as well as radioactive waste) have been studied in the Seibersdorf laboratory of IAEA. The intercomparison of these methods and training courses on this subject are helping the Member States to organize control of this kind of radioactive pollution.

Annex 12

WORLD METEOROLOGICAL ORGANIZATION

TECHNICAL NOTE No. 156

EFFECTS OF HUMAN ACTIVITIES ON GLOBAL CLIMATE

A summary, with consideration of the implications of a possibly warmer Earth

by
William W. Kellogg

WMO - No. 486

Secretariat of the World Meteorological Organization - Geneva - Switzerland

WMO

The World Meteorological Organization (WMO) is a specialized agency of the United Nations of which 147 States and Territories are Members.

It was created:

- To facilitate world-wide co-operation in the establishment of networks of stations for making meteorological observations as well as hydrological and other physical observations related to meteorology, and to promote the establishment and maintenance of centres charged with the provision of meteorological and related services;
- To promote the establishment and maintenance of systems for the rapid exchange of meteorological information;
- To promote standardization of meteorological and related observations and to ensure the uniform publication of observations and statistics;
- To further the application of meteorology to aviation, shipping, water problems, agriculture, and other human activities;
- To promote activities in operational hydrology and to further close co-operation between Meteorological and Hydrological Services;
- To encourage research and training in meteorology and, as appropriate, in related fields, and to assist in co-ordinating the international aspects of such research and training.

The machinery of the Organization consists of the following bodies:

The *World Meteorological Congress*, the supreme body of the Organization, brings together the delegates of all Members once every four years to determine general policies for the fulfilment of the purposes of the Organization, to adopt Technical Regulations relating to international meteorological practice and to determine the WMO programme.

The *Executive Committee* is composed of 24 directors of national Meteorological or Hydrometeorological Services. It meets at least once a year to conduct the activities of the Organization, to implement the decisions taken by its Members in Congress and to study and make recommendations on any matter affecting international meteorology and related activities of the Organization.

The six *Regional Associations* (Africa, Asia, South America, North and Central America, South-West Pacific and Europe), which are composed of Member Governments, co-ordinate meteorological and related activities within their respective Regions and examine from the regional point of view all questions referred to them.

The eight *Technical Commissions*, consisting of experts designated by Members, are responsible for studying any subject within the purpose of the Organization. Technical commissions have been established for basic systems, instruments and methods of observation, atmospheric sciences, aeronautical meteorology, agricultural meteorology, marine meteorology, hydrology, and special applications of meteorology and climatology.

The *Secretariat*, located at 41 Avenue Giuseppe-Motta, Geneva, Switzerland, is composed of a Secretary-General and such technical and clerical staff as may be required for the work of the Organization. It undertakes to serve as the administrative, documentation and information centre of the Organization, to make technical studies as directed, to support all the bodies of the Organization, to prepare, edit or arrange for the publication and distribution of the approved publications of the Organization, and to carry out duties allocated in the Convention and the regulations and such other work as Congress, the Executive Committee and the President may decide. The Secretariat works in close collaboration with the United Nations and its specialized agencies.

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Prepared in response to the request addressed to the president of CAS in Resolution 12(EC-XXVIII) and presented to the third session of the Executive Committee Panel of Experts on Climatic Change

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NOTE

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FOREWORD

In response to a request by the Seventh World Meteorological Congress, the WMO Executive Committee at its twenty-eighth session (1976) approved the text of an official WMO statement on climatic change which is reproduced in the following pages, and at the same time allocated responsibilities for promoting and co-ordinating work in three broad components of an integrated international effort related to studies of climatic change. The Commission for Atmospheric Sciences was given the main responsibility in respect of one of these namely, the work on assessing and predicting the effects of geoastrophysical processes and human activities on climate.

Dr. William W. Kellogg of the U.S. National Center for Atmospheric Research, a well-known expert in this field, was accordingly requested to prepare a document on the influence of human activities on climate.

Dr. Kellogg's draft was presented to the Executive Committee Panel of Experts on Climatic Change at its third session (February, 1977). The panel agreed that it was a very useful statement of the current state of knowledge of anthropogenic influences on climate, and recommended its publication as a WMO Technical Note after being revised by Dr. Kellogg in the light of comments by panel members and others. The panel pointed out, however, that the views expressed in the report would remain those of the author. The present publication constitutes the Technical Note as recommended by the panel.

I wish to convey the sincere thanks of WMO to Dr. Kellogg for his comprehensive and valuable report and also to the members of the panel and other scientists for their contributions to the final text which it is hoped will stimulate much-needed further research in this field of great interest and concern.

D.A. Davies
Secretary-General

SUMMARY

With the current state of knowledge about how the Earth's climate system operates and about possible external influences, it is difficult to make any predictions for the natural course of the climate in the next several decades. However, climate system models have now developed to the point where it is believed that a second kind of prediction can be made, viz., assuming that no unusually large naturally-induced fluctuation occurs in the interval, the climate will probably respond in a given way for a given change of one or more of the external or boundary conditions of the model. This makes possible a prediction of the course of the climate as a result of anthropogenic influences, other external factors remaining the same.

Experiments with a number of different models with widely varying degrees of complexity have now converged on approximately the same conclusions, namely:

- The largest single effect of human activities on the climate is due to the increase in atmospheric carbon dioxide concentration resulting from burning fossil fuels (coal, petroleum, natural gas), since the additional carbon dioxide gas absorbs infra-red radiation from the surface that would otherwise escape into space, producing an increase in lower atmosphere temperature.

- Virtually all of the other major activities of mankind also contribute to a warming of the lower atmosphere, for example, through injection into the atmosphere of airborne particles ("aerosols") and of other infra-red-absorbing trace gases (such as chlorofluoromethanes, nitrous oxide, etc.), and through the direct addition of heat ("thermal pollution").

- A best estimate of the resultant warming of the mean surface temperature of the Earth due to human activities is about 1°C by 2000 AD (25 per cent increase in atmospheric carbon dioxide) and about 3°C by 2050 AD (doubling of atmospheric carbon dioxide), with an uncertainty of roughly a factor of two. Warming of the polar regions is expected to be three to five times greater than the global average.

These conclusions are based on the assumption that there will be no worldwide effort to curb the use of fossil fuels and that the rate of carbon dioxide release to the atmosphere will continue to increase at a quasi-exponential rate, with only a slightly reduced rate of increase toward the end of the time frame. Since the exchange between the surface and deep waters of the oceans is slow, the decay time of the added carbon dioxide is expected to be between 1000 and 1500 years. Thus, if mankind proceeded to burn all the economically recoverable fossil fuel in the next few centuries, the corresponding increase in atmospheric carbon dioxide concentration would be five to eight times, and this increment would probably remain airborne for many more centuries.

The estimated climate change due to human activities for the year 2000 AD is probably larger than any natural climate change that has been experienced in the past 1000 years or more, and one would have to go back to the period 4000 to 8000 years ago to find a period approaching the degree of warming which is expected by the middle of the next century. A first survey of that past warm period indicates that there was generally more rainfall, especially in the areas of the present sub-tropical deserts, but that there were some regions at middle and high latitudes where it was drier than now. The warming would almost certainly have a major influnece on the extent of Arctic and Antarctic sea ice, and eventually would cause a change in the total volume of the major ice sheets of Greenland and the Antarctic, but the corresponding change in sea level cannot yet be predicted with any confidence.

The question is raised of how the decision-makers of the world can make use of this information, dealing as it does with a probable change that will only become readily apparent after a decade or two. The time scale of the scenario is longer than the planning cycle of most governments and most industires (but not all), and the implications of these future changes in terms of human well-being and national interests are still not clear, necessarily involving value judgements that are beyond the purvue of science.

In view of the importance of these probable climatic changes and their societal implications, it is imperative that more effort be devoted to narrowing the areas of uncertainty so that a clearer picture can be drawn of the options still open. It is specifically recommended that research be directed along the following lines:

- Improvement of climate models.
- Quantitative assessment of sources and sinks for carbon dioxide.
- Response of the floating Arctic pack ice to a warming.
- Response of the polar ice sheets to a warming.
- Regional changes of patterns of temperature and precipitation.
- Effects of anthropogenic aerosols on climate.
- Other human influences on climate such as patterns of land use, changes of stratospheric composition, and so forth.

RESUME

En l'état actuel de nos connaissances sur la manière dont fonctionne le système climatique de la Terre et sur les influences extérieures qui peuvent s'exercer sur ce système, il est difficile d'établir quelque prévision que ce soit quant à l'évolution naturelle du climat au cours des prochaines décennies. Toutefois, de telles améliorations ont été apportées aux modèles du système climatique qu'on estime maintenant possible d'établir des prévisions d'une autre nature, c'est-à-dire, dans l'hypothèse où aucune fluctuation d'origine naturelle d'ampleur inhabituelle ne se produira entre-temps, comment le climat réagira-t-il à une modification donnée d'une ou de plusieurs conditions externes ou limites du modèle ? Il est, dès lors, possible de prévoir l'évolution du climat sous l'influence des activités humaines, dans le cas où les autres facteurs externes restent les mêmes.

Les expériences effectuées avec un certain nombre de modèles différents et dont le degré de complexité était fort variable ont maintenant abouti à des conclusions convergentes, à savoir :

- L'effet singulier le plus prononcé qu'ont des activités humaines sur le climat est dû à l'augmentation de la concentration du gaz carbonique dans l'atmosphère, qui résulte de la combustion de combustibles fossiles (charbon, gaz naturel). En effet, en absorbant le rayonnement infrarouge émis par la surface de la Terre et qui, sans cela, se propagerait dans l'espace, les quantités croissantes de gaz carbonique présentes dans l'atmosphère provoquent une hausse de la température de la basse atmosphère.

- Pratiquement toutes les autres activités importantes de l'humanité contribuent aussi à réchauffer la basse atmosphère, notamment par l'injection dans l'atmosphère de particules en suspension (aérosols) et d'autres gaz qui absorbent le rayonnement infrarouge (par exemple chlorofluorométhanes, protoxyde d'azote, etc.), ainsi que par le rejet direct de chaleur (pollution thermique).

- La meilleure estimation que l'on puisse donner du réchauffement de l'atmosphère sous l'effet des activités humaines est que la température moyenne à la surface de la Terre s'élèvera de 1°C d'ici l'an 2000 (augmentation de 25 pour cent de la quantité de gaz carbonique dans l'atmosphère) et d'environ 3°C d'ici l'an 2050 (doublement de la quantité de gaz carbonique dans l'atmosphère), l'incertitude étant en gros du facteur 2. On s'attend à ce que le réchauffement des régions polaires soit de trois à cinq fois plus prononcé qu'en moyenne sur le globe.

Ces conclusions reposent sur l'hypothèse qu'aucun effort ne sera déployé à l'échelle mondiale pour limiter la consommation des combustibles fossiles et que la quantité de gaz carbonique libérée dans l'atmosphère continuera à augmenter à un rythme quasi exponentiel qui ne fléchira légèrement que vers la fin de la période considérée. Du fait que, dans les océans, les échanges entre les eaux de surface et les eaux profondes s'effectuent lentement, on estime qu'il faudra de 1000 à 1500 ans pour que le

gaz carbonique supplémentaire apporté à l'atmosphère soit éliminé. Dans ces conditions, si, au cours des tout prochains siècles, l'homme brûle tous les combustibles fossiles économiquement récupérables, la concentration du gaz carbonique dans l'atmosphère augmentera de cinq à huit fois et cet apport de gaz persistera probablement dans l'atmosphère pendant un nombre de siècles bien plus considérable encore.

Le changement climatique attendu en l'an 2000 du fait des activités humaines sera probablement plus grand que n'importe lequel des changements climatiques naturels qui se sont produits au cours du millénaire écoulé ou même au-delà. Il faudrait remonter de quatre à huit mille ans en arrière pour trouver une période caractérisée par un degré de réchauffement voisin de celui escompté pour le milieu du prochain siècle. Une première analyse de cette période de réchauffement antérieure montre qu'elle s'est généralement accompagnée d'une augmentation de la pluviosité, particulièrement dans les zones où se situent actuellement les déserts subtropicaux, mais que, par contre, dans certaines régions des latitudes moyennes et élevées, le climat était plus sec qu'actuellement. Ce réchauffement aurait certainement une influence profonde sur l'étendue des champs de glaces de mer de l'Arctique et de l'Antarctique et modifierait finalement le volume des immenses calottes glaciaires du Groenland et de l'Antarctique, mais il n'est pas encore possible de prévoir de combien le niveau de la mer s'en trouverait modifié.

La question se pose de savoir comment ceux qui, dans le monde, ont pouvoir de décider peuvent utiliser une telle information concernant une évolution probable qui ne deviendra réellement perceptible que d'ici une ou deux décennies. Le scénario se développe sur une période plus longue que le cycle de planification de la plupart des gouvernements et de la plupart des industries (encore qu'il y ait des exceptions) et les répercussions de cette évolution future du climat sur le bien-être des populations et les intérêts nationaux demeurent encore très imprécises, d'autant plus qu'à ce niveau interviennent forcément des jugements de valeur qui sortent du cadre de la science.

Etant donné l'importance des changements climatiques probables et les implications qu'ils comportent pour les sociétés, il faut s'efforcer toujours davantage de restreindre les domaines d'incertitude, afin de dresser un tableau plus précis des options qui restent ouvertes. Il est recommandé, en particulier, d'orienter les recherches dans les directions suivantes :

- Amélioration des modèles climatiques
- Evaluation quantitative des sources et des puits de gaz carbonique
- Conséquences d'un réchauffement sur la banquise flottante de l'Arctique
- Conséquences d'un réchauffement sur les calottes glaciaires polaires
- Changements de la distribution des températures et des précipitations à l'échelle régionale
- Influence des aérosols d'origine humaine sur le climat
- Autres influences exercées par l'homme sur le climat en raison, par exemple, de l'aménagement du territoire, des changements apportés à la composition de la stratosphère, etc.

РЕЗЮМЕ

Состояние существующих знаний о климатической системе Земли и о возможных внешних влияниях на эту систему делает трудной задачу составить какое-либо предсказание естественного развития климата в течение следующих нескольких декад. Однако модели климатических систем разработаны в настоящее время в такой мере, что представляется возможным составить предсказание другого рода, а именно: допуская, что в промежутке не произойдет никаких необычно больших изменений, вызванных природными источниками, климат, очевидно, будет реагировать определенным образом на данное изменение одного или более внешних или пограничных условий модели. Это делает возможным предсказать ход климата в результате антропогенного влияния. При этом предполагается, что другие внешние факторы остаются без изменения.

Эксперименты с большим количеством различных моделей различной степени сложности приводят приблизительно к тем же самым заключениям, а именно:

- Наибольшим единичным воздействием человеческой деятельности на климат является повышение концентрации атмосферной двуокиси углерода, возникающей в результате сжигания ископаемого топлива (уголь, нефть, природный газ), так как дополнительное количество двуокиси углерода поглощает инфракрасное излучение с поверхности земли, которое, в противном случае, уходило бы в космическое пространство, вызывая тем самым повышение температуры в нижней атмосфере.

- Фактически, все другие основные виды деятельности человека также вносят свой вклад в потепление нижней атмосферы, например, в результате поступления в атмосферу взвешенных частиц ("аэрозолей") и других газов, находящихся в виде следов и поглощающих инфракрасную радиацию (таких как хлорфторметаны, окись азота и др.), а также путем непосредственного излучения тепла ("тепловое загрязнение").

- Результирующее повышение средней приземной температуры Земли в связи с человеческой деятельностью оценивается приблизительно в 1°С к 2000 году н.э. (повышение атмосферной двуокиси углерода на 25%) и около 3° к 2050 году н.э. (повышение содержания окиси углерода в атмосфере в два раза) с фактором неопределенности приблизительно равным двум. Предполагается, что потепление полярных районов будет в 3-5 раз большим, чем в среднем в глобальном масштабе.

Эти заключения основаны на допущении, что в мировом масштабе не будет принято каких-либо усилий по ограничению использования ископаемого топлива и что количество поступления двуокиси углерода в атмосферу будет увеличиваться по квази-экспоненциальному закону лишь с небольшим сокращением в конце указанного периода времени. Так как обмен между поверхностными и глубокими водами океана происходит медленно, предполагается, что время распада дополнительного количества двуокиси углерода находится в пределах 1000 и 1500 лет. Таким образом, если человечество будет продолжать сжигать все ископаемое топливо, добыча которого экономически оправдана, концентрация двуокиси углерода в атмосфере увеличится соответствующим образом в 5-8 раз, и это дополнительное количество двуокиси углерода,очевидно, будет оставаться в атмосфере в течение многих веков.

Оцениваемое изменение климата в связи с человеческой деятельностью к 2000 году нашей эры будет, вероятно, большим, чем любое естественное климатическое изменение, имевшее место за прошедшие 1000 лет или более, и для того, чтобы найти период с потеплением приблизительно сходным с тем, которое ожидается к середине следующего века, необходимо изучить климат за последние 4000 или 8000 лет. Первая оценка прошлых периодов потепления показывает, что, в целом, имело место большее количество осадков, особенно в районах существующих субтропических пустынь, но были также районы в средних и высоких широтах, в которых климат был более сухим, чем сейчас. С большой степенью уверенности можно сказать, что потепление оказало бы влияние на состояние арктического и антарктического морского льда и, очевидно, послужило бы причиной изменения общего объема основного ледяного покрова Гренландии и Антарктики, однако соответствующие изменения уровня моря не могут быть предсказаны с достаточной достоверностью.

Возникает вопрос о том, каким образом лица, принимающие решения в мировом масштабе, могут использовать данную информацию, имея в виду при этом, что они имеют дело лишь с вероятным изменением, которое станет абсолютно очевидным через одно или два десятилетия. Временной масштаб предполагаемых изменений больше, чем циклы планирования, применяемые большинством правительств и промышленных кругов (но не всех), и значение этих будущих изменений для благосостояния человека и для национальных интересов все еще не достаточно ясно. Требуются более точные оценки, которые наука пока еще не в состоянии провести.

Учитывая важность этих вероятных климатических изменений и их значения для общества, представляется необходимым приложить больше усилий для того, чтобы сузить области неопределенности и определить более четкую перспективу выбора существующих путей. Конкретно рекомендуется, чтобы исследования проводились в следующих областях:

- усовершенствование климатических моделей;
- количественная оценка источников и стоков двуокиси углерода;
- реакция арктического плавающего пакового льда на потепление;
- реакция полярных ледяных покровов на потепление;
- региональные изменения в распределении температуры и осадков;
- влияние аэрозолей антропогенного происхождения на климат;
- Влияние других видов человеческой деятельности на климат, таких как некоторые виды землепользования, изменение состава стратосферы и т.д.

RESUMEN

Con los conocimientos que actualmente poseemos sobre el funcionamiento del sistema climático de la tierra y sobre las posibles influencias externas es difícil hacer cualquier predicción del curso natural del clima en los próximos decenios. Sin embargo, los modelos del sistema climático se han desarrollado hasta tal punto que se estima posible hacer un segundo tipo de predicción, es decir, suponiendo que en el intervalo no se produzcan grandes fluctuaciones anormales de origen natural, el clima probablemente responderá en un sentido dado a un cambio determinado de una o más de las condiciones externas o límites del modelo, lo que hace posible una predicción del curso del clima como resultado de influencias antropogénicas, siempre que no se modifiquen otros factores externos.

Los experimentos realizados con varios modelos diferentes de complejidad muy diversa han permitido llegar en la actualidad a aproximadamente las mismas conclusiones, es decir:

- El efecto individual más importante de las actividades humanas en el clima se debe al aumento de la concentración de anhídrido carbónico en la atmósfera como consecuencia de la combustión de combustibles fósiles (carbón, petróleo, gas natural), ya que el anhídrido carbónico adicional absorbe la radiación infrarroja de la superficie que de otro modo se hubiera liberado en el espacio, produciendo un aumento de la temperatura de la atmósfera inferior.

- Prácticamente todas las demás actividades importantes del hombre también contribuyen a un calentamiento de la atmósfera inferior, por ejemplo mediante la inyección en la atmósfera de partículas en suspensión en el aire ("aerosoles") y de otros gases raros que absorben la radiación infrarroja (tales como los clorofluorometanos, óxido nitroso, etc.), y a través de la adición directa de calor ("contaminación térmica").

- La mejor estimación del calentamiento resultante de la temperatura media de la superficie de la tierra debido a actividades humanas es de aproximadamente 1°C para el año 2000 (un aumento del 25 por ciento del anhídrido carbónico en la atmósfera) y de unos 3°C para el año 2050 (el doble de anhídrido carbónico en la atmósfera), con una incertidumbre de aproximadamente un factor de dos. Se espera que el calentamiento de las regiones polares será de tres a cinco veces mayor que la media mundial.

Estas conclusiones se fundan en el supuesto de que no se desplegarán esfuerzos mundiales para frenar la utilización de combustibles fósiles y de que el ritmo de liberación de anhídrido carbónico en la atmósfera continuará aumentando a un índice casi exponencial, con solamente un ritmo ligeramente reducido de aumento hacia finales del período. Como los intercambios entre la superficie y las aguas profundas de los océanos son lentos, se espera que el período de disminución del anhídrido carbónico añadido se

sitúe entre 1.000 y 1.500 años. Por lo tanto, si la humanidad quemase todos los combustibles fósiles económicamente recuperables en los próximos siglos, el correspondiente aumento de la concentración de anhídrido carbónico en la atmósfera sería de cinco a ocho veces, y este incremento probablemente permanecería en el aire durante muchos más siglos.

Los cambios climáticos estimados para el año 2000 debidos a actividades humanas son probablemente mayores que cualquier cambio climático natural que se haya producido en los últimos 1.000 años o más, y habría que volver al período de 4.000 a 8.000 años atrás para hallar un período que se aproxime al grado de calentamiento que se prevé para medidados del próximo siglo. Un primer estudio de dicho período pasado de calentamiento indica que generalmente se produjo más precipitación, especialmente en las zonas de los actuales desiertos subtropicales, pero que existieron algunas regiones situadas en latitudes medias y altas donde el clima fue más seco que actualmente. El calentamiento tendrá casi con toda seguridad una gran influencia en la extensión de los hielos marinos del Artico y el Antártico, y eventualmente producirá un cambio en el volumen total de los principales casquetes glaciares de Groenlandia y del Antártico, pero todavía no puede predecirse con ninguna seguridad cuál será el cambio correspondiente del nivel del mar.

Se plantea, por lo tanto, la cuestión de cómo los responsables en el mundo de la adopción de decisiones pueden utilizar esta información, tratándose como en este caso de un probable cambio que únicamente comenzará a percibirse claramente después de uno o dos decenios. La escala cronológica de esta situación es superior al ciclo de planificación de la mayoría de los gobiernos e industrias (pero no de todos ellos), y todavía no están en claro cuáles serán las consecuencias de estos futuros cambios en términos de bienestar humano e intereses nacionales, lo que necesariamente lleva consigo juicios de valor que no son de la incumbencia de la ciencia.

Dada la importancia de estos probables cambios climáticos y sus consecuencias sociales, es imperativo desplegar mayores esfuerzos para reducir los sectores de incertidumbre a fin de poder obtener una imagen más clara de las opciones que todavía se presentan. En especial, se recomienda que la investigación se oriente de acuerdo con las siguientes líneas:

- Perfeccionamiento de los modelos climáticos.

- Evaluación cuantitativa de las fuentes y de las pérdidas de anhídrido carbónico.

- Respuesta de los hielos a la deriva flotantes del Artico a un calentamiento.

- Respuesta de los casquetes glaciares polares a un calentamiento.

- Cambios regionales de la distribución de la temperatura y la precipitación.

- Efectos de aerosoles antropogénicos en el clima.

- Otras influencias humanas en el clima, tales como planes de aprovechamiento de tierras, cambios de la composición estratosférica, etc.

WMO STATEMENT ON CLIMATIC CHANGE

1. In spite of man's remarkable advances in technology, his economic and social welfare are still highly dependent on climate. Food production especially is significantly affected by variations in climate as evidenced by the decrease in world grain reserves over recent years. This dependence is becoming of even greater importance in the face of the demands of an increasing world population. But it is not only the demand for food which illustrates man's dependence on climate; floods, droughts and extremes of temperature seriously disrupt urban communities, interfere with agriculture, industry and commerce, and hamper economic and social development.

2. Evidence of conditions of the Earth's climate in past decades, centuries, millennia and geological epochs has been deduced from a wide variety of direct and indirect sources. This evidence clearly reveals that climate exhibits variations on all scales of time. Since the climate has been so continuously variable due to natural causes in the past, it must be assumed that it will continue to vary in the future. However, long-term trends in global climate are masked by shorter-term fluctuations and by regional changes; exceptionally wet or warm conditions in one region are often accompanied by unusually dry or cool conditions in another.

3. The recent occurrences in certain regions of climatic extremes persisting for a few weeks, months or even years, such as excessive rain, droughts and high or low temperatures, have led to speculation that a major climatic change is occurring on a global scale, which could involve a transition to one or another of the vastly different climates of past ages. While such a global change could occur from natural causes, the trend towards such a change is likely to be gradual, and would be almost imperceptible. This is because the fluctuations over shorter periods of time are likely to be so much larger as to obscure these long-term trends. It is these shorter-term climate changes, which may be due to natural or man-made causes, that now require urgent attention and further studies.

4. The natural shorter-term variability of climate is becoming of increasing importance as the result of growing pressures on limited natural resources. It is this variability which has been highlighted by the disastrous droughts and weather extremes in many parts of the world which have caused so much human suffering and have adversely affected economic development. It is the changes associated with this variability to which governments could respond if sufficient advance warning could be given.

5. The possible change of climate resulting from man's activities is at least of equal concern. Burning of oil and coal increases the amount of carbon dioxide in the atmosphere and this could produce a long-term warming and, as a consequence, large-scale changes in rainfall distribution. The release of chemicals (for example, chlorofluoromethanes) and the increase in the dust content in the atmosphere as a result of man's activities, if not checked, might also alter the climate. Direct thermal emissions from urban and industrial areas have already affected climate on a local scale and could have wider effects if these emissions were to increase. However, with the present state of knowledge of the atmosphere it is not possible to give an accurate assessment of the magnitude of such changes.

6. Being aware of the importance and urgency of these problems, meteorologists and other scientists have taken steps to improve the quality and accessibility of data relating to past behaviour of the atmosphere, the oceans and other relevant environmental factors; they are seeking to improve the monitoring of current climatic developments and of environmental changes to assess the impact of natural processes and of man's activities; they are endeavouring to intensify research aimed at a better understanding of climatic processes and the impact of climatic variability on the natural environment and on human activities.

7. In view of the increasing importance of the inherent shorter-term variability of climate to many human activities greater use should be made of existing knowledge of this variability in planning for economic and social development; for example, an assessment of the probability of occurrence of rainfall within given ranges can provide an assessment of the viability of proposed agricultural or hydrological projects. If the results of further research by meteorologists and other scientists reveal that man's activities could produce changes in climate having serious consequences for mankind, political and economic decision makers would be faced with additional problems, as described in paragraph 5. Further research in climatic change is therefore of the greatest importance.

8. In summary, the present views of WMO on climatic change and its study are as follows:

(a) Although in the long-term, a major natural change to a different climatic régime must be expected, it is unlikely that any trend towards such a change would be perceptible in the short term as it would be obscured by the large shorter-term climatic variability;

(b) The shorter-term natural or possible man-made changes in climate are of immediate concern because of their important impact on human welfare and economic development;

(c) An improved ability is needed to predict short-term natural changes in climate to enable governments to consider appropriate action;

(d) Improved understanding of and improved ability to predict the impact of man's activities on the global climate is needed in view of their possible consequences;

(e) Existing knowledge of natural short-term climatic variability, although limited, should be used more effectively in planning economic and social development.

June 1976

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1. INTRODUCTION

1.1 Purpose of this report

There has been an understandable reluctance on the part of the scientific community to openly engage in debate on the controversial and sometimes agonizing question of the extent to which we, mankind, may influence the world's climate. Nevertheless, it is already clear that the issue is unavoidable, and that we must lock horns with it.

Recognizing this, the World Meteorological Organization (WMO) has taken a number of steps to obtain advice on matters of climatic change generally, and anthropogenic influences on climate in particular. This report is one of those steps. (See Foreword to this document by the Secretary-General.) It was prepared to help the WMO's Executive Committee Panel of Experts on Climatic Change in its continuing consideration of these important matters, and is being distributed as a WMO Technical Note (on the recommendation of the Panel) in order to enlarge the arena of the discussion.

It should be emphasized that the assumptions and conclusions contained in this document will probably not meet with universal agreement, and that responsibility for them must rest with the author. However, the case has been carefully studied and documented, as will be seen, and therefore does represent an attempt to express a kind of consensus of those who have thought the most about climatic change and possible future human influences on it.

The author has felt free in this effort to draw material from a forthcoming book ("Climate Change," edited by John Gribbin, Cambridge University Press), in which he has a chapter covering many of these same subjects.

We cannot leave such a review of the physical factors involved in future climatic change without at least touching on some of the social and political implications. Physical science is still not able to provide answers for most of these societal implications, involving as they do "value judgments," but nevertheless we can attempt to present a probable scenario of the future so that the decision makers of the world can begin to formulate their various value judgments. That is, we believe, the ultimate purpose of this report.

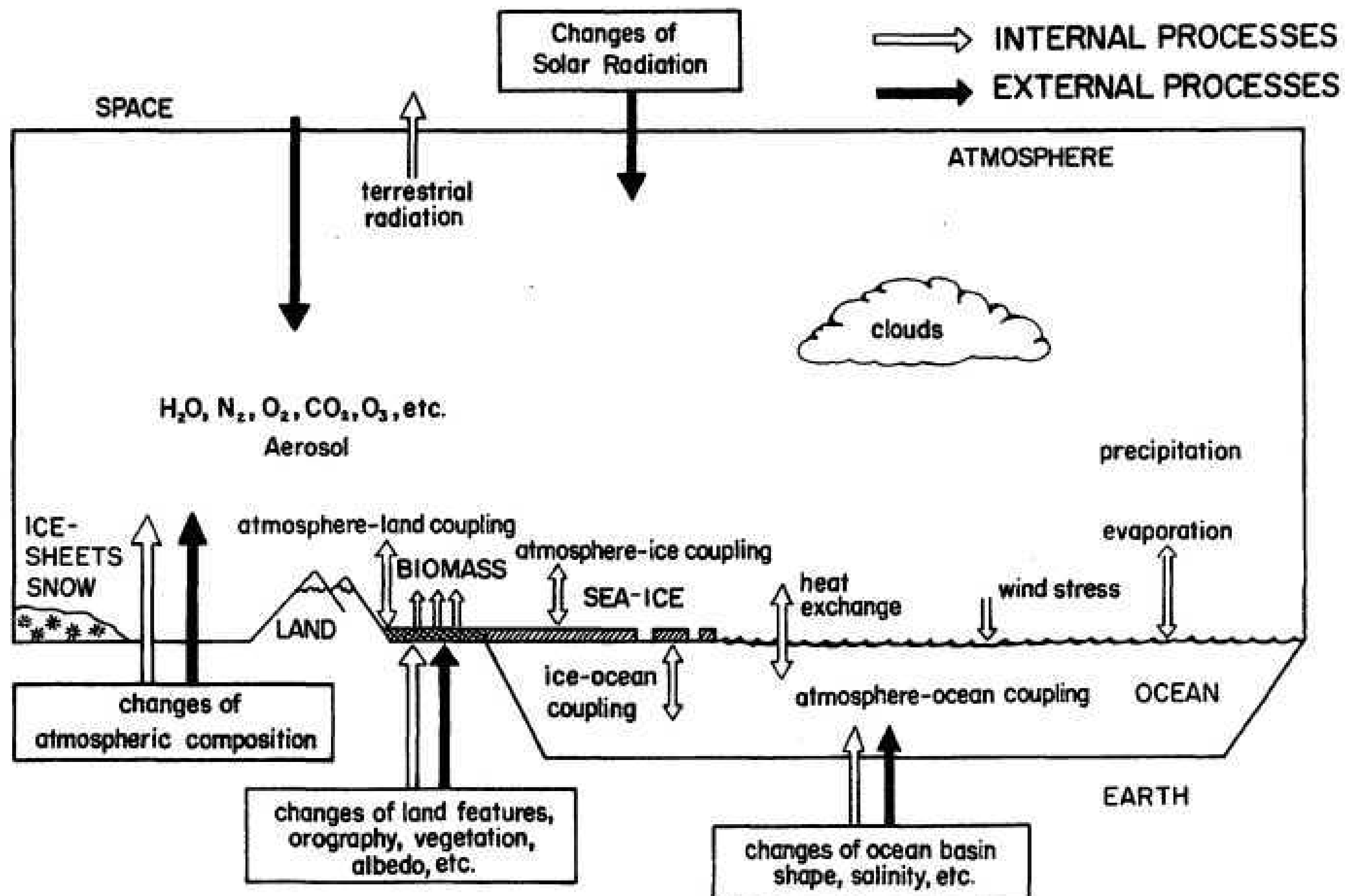

Figure 1. Schematic representation of the interacting components of the coupled atmosphere-ocean-ice-land surface-biomass climate system. [Adapted from Figure 3.1, GARP-16 (1975).]

1.2 Climate change and its predictability

A great deal has been said about the predictability of weather and climate. For example, roughly half of the appendices in GARP-16 (1975) refer in one way or another to the matter. [The reference here is to the WMO/International Council of Scientific Unions (ICSU) report on "The Physical Basis of Climate and Climate Modelling," the result of a major international conference sponsored by the Joint Organizing Committee for the Global Atmospheric Research Program (GARP).] Two discussions there that are particularly illuminating and incisive are Appendix 2.1 (by E. N. Lorenz) and 2.2 (by C. E. Leith); and it appears that the rather pessimistic view of Lorenz prevailed when the Summary was being written, which says: "...we are at present not able to tell what kind of future climate changes are likely to occur nor can we assess the extent to which man himself may inadvertently cause such changes."

If we believed that statement to be literally true, we would not pursue the subject of this report any further. However, Lorenz himself makes an important distinction between two kinds of predictions. First, he considers the prediction of changes in the statistics of the ensemble of different states of the atmosphere due to the many interactions within the climate system itself. A second kind of problem is the prediction of how these climate statistics will change as a result of an alteration in the external or boundary conditions of the system, as illustrated schematically in Figure 1.

It is generally conceded that prediction of the first kind is going to be extremely difficult; it may even prove to be theoretically impossible. It seems clear that we will never be able to forecast day-to-day weather for more than a few weeks in advance. If no significant periodicities exist in the behavior of the climate (other than the 24-hour and 12-month periods), we will not be able to predict its course either for periods longer than the longest decay time of an important component of the system. For example, the upper levels of the oceans may turn out to be the internal component in our models with the longest "memory." Depending on the depth of ocean considered, this "memory" is on the order of a few months to a few years, compared to the atmosphere's relaxation time or "memory" of about three days (Namias, 1974). Similarly, ice and snow cover may prove to have some year-to-year "memory" which could be taken into account. But even granting that these components have some sort of "memory," their prediction and incorporation into climate models will be no simple matter. Thus, the outlook for developing a useful long-term capability to predict the natural variation of climate on a time scale of years to decades seems rather dim.

Prediction of the second kind (to use Lorenz's term) is a different matter. Our present climate models can simulate the long-term equilibrium climate with some realism when current boundary conditions are used. If changes in boundary conditions take place slowly over time periods much longer than the response time of the system, then the climate should be always quite close to equilibrium. We can therefore use our climate models to take successive "snapshots" of the system as it slowly responds to changing boundary conditions. (We would not need to assume such a near-equilibrium state if we could specify the relaxation time of the system after impulsive forcing. However, the changes which we will be considering will generally be relatively small and slow, so that the equilibrium approximation will usually suffice--two exceptions being the uptake of carbon dioxide by the world's oceans and the response of the great ice sheets of Greenland and Antarctica, as will be pointed out.)

Two elements are needed if such predictions of the second kind are to be useful and credible. We must be able to specify a response function of matrix which relates changes in climate parameters to given changes in boundary conditions. And we must have faith that these changes will be unique, that is, that only one stable equilibrium climate corresponds to one set of boundary conditions. To borrow Lorenz's terminology again (Lorenz, 1970), we must believe that the system is "transitive."

The concept of intransitivity or "almost intransitivity" that Lorenz has so deftly injected into recent discussions of climate predictability (Lorenz, 1970) hangs like a black cloud over those who are seeking to throw some light on the study of human influences. There is the theoretical possibility that a system as complex and interactive as the climate system may have several "solutions" corresponding to a single set of boundary conditions. Which of these the real atmosphere will choose would then be a matter of chance. Indeed, it might be possible for the climate to remain in one state for some time, and then spontaneously jump to an alternate state with no change in the forcing functions or boundary conditions. Some of our climate models have these characteristics, but we are not really sure to what extent this rather disquieting theoretical possibility plays a real role in the prediction of climate.

However, most of our current models do possess stable steady-state solutions. They may, in fact, be unrealistically stable. Lorenz has noted (GARP-16, 1975, p. 136): "A final shortcoming of all models so far considered...is that they are too deterministic." Even the most physically complex three-dimensional time-dependent ones settle down after a suitable period (depending upon the amount of upper ocean included) to a condition where the ensemble mean statistics no longer change with time as long as boundary conditions are fixed.

Leith is apparently not depressed by Lorenz's "black cloud," and takes a more pragmatic view of predictions of the second kind. He says (GARP-16, 1975, p. 140), "For sufficiently small changes about the present climate we would expect a linear analysis to be appropriate, and in mathematical terms the problem becomes one of determining a response matrix whose elements are sensitivity coefficients. For larger changes, of course, second-order effects become important and a linear analysis is inadequate, but many questions of climate stability could be answered from a knowledge of the linear response matrix.... The slowly changing ensemble mean we may call a signal which we may hope to be able to predict through the use of climate models. The practical value of such predictions will depend in the usual way, of course, on the ratio of signal to noise," where the <u>noise</u> in this case may (for time dependent models) be the unpredictable daily or seasonal-mean fluctuations.

Many of these arguments will be familiar to the readers of this report, and we would not review them here were it not for the fact that there are those who prefer to be extremely conservative in their views on predictability--even predictability of the second kind.

There is still another reason for being conservative, and that is the fact that there are at least two (and possibly more) interactions or feedback loops in the real climate system that we do not know how to include properly in our climate models. They are the cloudiness-temperature-albedo loop, and the atmosphere-ocean circulation-sea surface temperature loop (SMIC, 1971; GARP-16, 1975).

For the time scales involved in our predictions of the second kind (a decade to a century) it is very probable that the upper levels of the oceans and not the deep oceans will be involved, and the response time of these upper levels <u>to a warming</u> will be shorter than for a cooling, and probably not more than a few years. The most probable effect of the oceans, therefore, will be to slow any change of mean surface temperature because of their large heat capacity--a small damping of that change. (Their role in taking up excess carbon dioxide is a separate matter that will be taken up in Section 2.2.2.)

As for amount of cloudiness and its reponse, we cannot be sure that it will not exert an important influence on a climate change, and we do not even know the direction of the feedback—whether positive (amplifying) or negative (damping). Changes in the middle or high clouds would have relatively small effects in any case, since their influence on the heat budget due to the albedo change is roughly cancelled by their influence on the outgoing infrared radiation; but, on the other hand, changes in low cloudiness can have an

appreciable effect on albedo without a compensatory infrared effect (Manabe, 1971; 1975; SMIC, 1971; Schneider, 1972). Experiments with general circulation models, such as that of the U.S. National Center for Atmospheric Research (NCAR), in which clouds are a variable internal parameter (Schneider and Gal-Chen, 1973) and empirical studies of the response of satellite-determined cloudiness to changes in temperature (Budyko, 1975; Cess, 1976; White and Chýlek, 1977) all indicate that the amount of cloudiness responds rather weakly, and the feedback effect must therefore also be weak. There is some evidence from modeling experiments suggesting that cloudiness may provide a mild positive feedback in the tropics when a major part of the tropical oceans are warmed or cooled, but a negative feedback when the sea surface temperature of a limited area is changed--in the latter case clouds form preferably over a warm area, raising the albedo and reducing the solar radiation available at the surface (Chervin, private communication).

In view of the above we can argue with some conviction that ignoring cloudiness as a feedback mechanism will not greatly invalidate the results of climate modeling experiments and prediction of the second kind. Nevertheless, we are gratified to see that the GARP Joint Organizing Committee (JOC) has repeatedly stressed the need for research in this area and has called for an integrated study of Cloudiness and Radiation Budget, part of which is called STRATEX, in cooperation with the IAMAP Radiation Commission and Commission on Cloud Physics (JOC-XII, 1976, p. 8).

1.3 The growing magnitude of human interventions

Regional climate change in large cities and industrialized areas is an accepted fact. There are now sizeable areas, of 10^3 to 10^4 km^2 or greater, where the heat released by human activities is more than 10 percent of the amount of solar radiation absorbed at the surface (SMIC, 1971) and urban "heat islands" can have temperatures at night and in winter that are many degrees warmer than the surrounding countryside.

Furthermore, either as a result of the extra heating or the addition of cloud condensation and freezing nuclei, convective precipitation downwind from such cities as Chicago, St. Louis, and Paris has been significantly increased (Dettwiller and Changnon, 1976).

There is much talk of building "power parks," where a very large electric generation capacity would be concentrated in one limited area of a few square kilometers--partly for efficiency, partly for security. In the U.S. and Europe up to 10 Gw installations are being planned, and we understand that even 100 Gw power parks are starting to be seriously considered. Assuming that at least half of this power will be released in the form of heat rather than electricity, the 100 Gw power parks begin to be comparable in thermal energy release to the Surtsey volcano, a savannah brushfire, or a large thunderstorm (Hanna and Gifford, 1975). (See also discussion by Flohn in App.1.2, GARP-16, 1975).

It is therefore evident that those concerned with environmental changes must already take note of the effects of human activities on regional scales, but the subject of this report is still larger scales of change. Here we have no very persuasive evidence that a global climate change has already come about as a result of human activities, but when we consider the rate of growth of these activities it seems only a matter of time--how long? that is the question.

To emphasize this point we will repeat a few well known statistics: World population is increasing at about 2 percent per year (it is less in the more industrialized countries), energy and other resources going into food production are increasing at 3 to 4 percent per year (though famine seems to persist in many places), and world energy use is increasing at roughly 6 percent per year, possibly more (eg. SMIC, 1971; Häfele, 1974). Current total world energy production is about 10×10^3 Gw (10 Tw), and we can compare this with the 8×10^7 Gw rate of absorption of solar energy at the surface, a factor of almost 10^4 more. The reason that the total energy use is rising faster than the population is obviously due to a growing per capita energy use, which is currently about 2.5 kw (it is highest in the U.S.A., ~ 10 kw). A recent study indicates that this per capita energy use may now be rising at more than 5 percent per year (Kahn *et al.*, 1976).

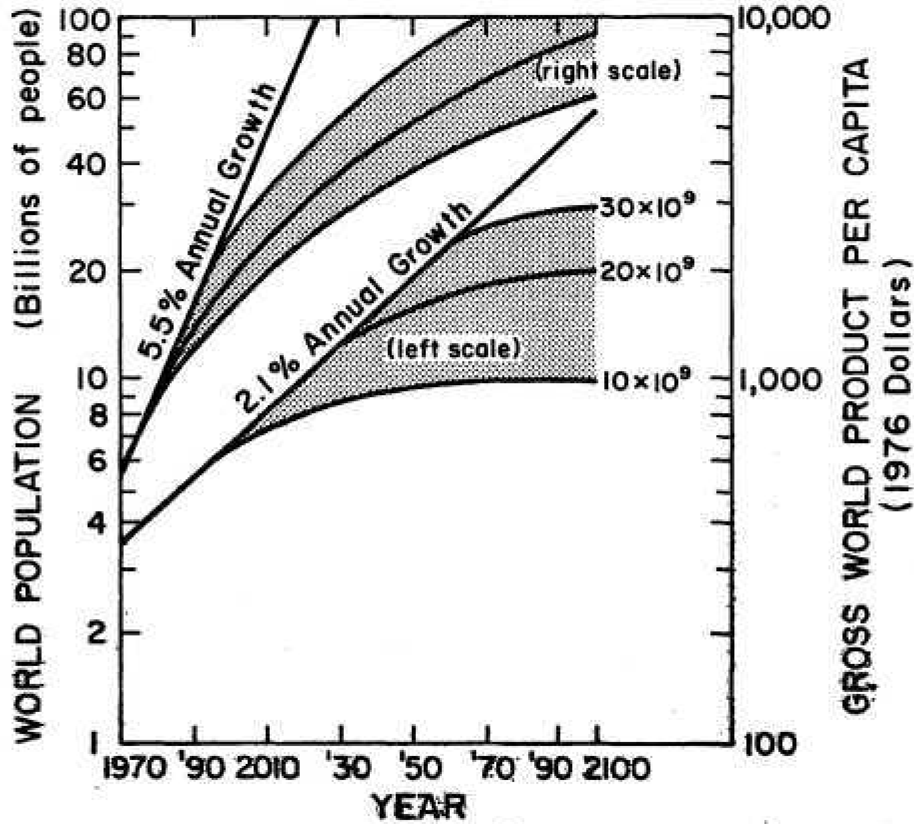

Figure 2. A set of possible projections of world population and gross world product (GWP) per capita. The GWP per capita follows approximately the scenario described by Kahn et al. (1976, Figure 5, p. 56). It will be noted that these curves tend toward a leveling-off or steady state, which is obviously more realistic than any continued exponential growth. Nevertheless, they should not be taken as "predictions," but rather as a rough indication of the time scale involved in any such evolutionary process.

What can we say about the future trends? One obvious remark is that exponential increases cannot continue indefinitely, so the pertinent questions relate to the limits to growth and the time scales involved. Figure 2 illustrates what we mean. This is presented to show the sort of time scale involved if there is to be an orderly leveling out to a "post-industrial society," as some call it. It shows that the transition from the present period of maximum growth to some sort of steady state must be completed by the end of the next century, unless there are catastrophes such as a major nuclear war or very widespread famines. There seems to be a growing optimism on this matter among "futurists," and even the relatively conservative Club of Rome at its meeting in Philadelphia in April 1976 concluded that a successful growth transition of this sort could take place in a major part of the world (though some countries would probably not succeed).

We will not belabor this point further, but it is the basis for an important assumption that we will have to make in our scenario of the future: Societal growth will continue for the next few decades at only slightly diminished rates, but it will level off in a little more than 100 years. This assumption will have other ramifications that we will bring up in the appropriate places, such as the future availability of fossil fuels.

1.4 Societal attitudes toward climate change

As we have mentioned, the thought that mankind could influence the entire climate of the planet on which it lives is a disturbing one. Those who subscribe to the "environmental ethic" fight to preserve what remains of wilderness areas, tidelands, and other unspoiled spots on the earth, and there is a growing sense of tribal guilt over the inroads of human technology on nature. Many, especially in the younger generation, express real alarm over the advances of technology and seek a limit to material growth and a return to some sort of simpler society; and there are well informed and responsible scientists who share in this concern, believing that the ecological system of the world (which includes mankind as just one component) cannot stand much further imbalance (eg., Holdren and Ehrlich, 1974; Heilbronner, 1974).

In such an atmosphere of apprehension it is especially important, we believe, for those who are wrestling with the question of our impact on climate to do our homework as carefully as possible and to report our conclusions clearly and objectively, along with our assumptions and the uncertainties involved. If we conclude that the evidence favors a prediction of inadvertent climate change, its implications must also be spelled out.

Climate change cannot be said to be either "good" or "bad" until we understand better what we mean by those words, and, even then, there will be a value judgment. Furthermore, we can expect that some people will be better off and others worse off, so such broad generalizations could very well be meaningless anyway.

This, too, will be a point to which we will return in Section 4.

2. A SCENARIO OF MANKIND'S INFLUENCE ON CLIMATE

2.1 Predictions of the second kind

In Section 1.2 we discussed the distinction between the problem of trying to predict natural climate change or fluctuations and the problem of trying to predict what would happen to the climate with a given change of a boundary condition. It is the second kind of prediction that we are dealing with here, and it is necessary to say something at the outset about how the task has been approached.

All the influences on climate that we will be dealing with, with one or two minor exceptions, operate through a change in the heat balance of the system (See Figure 1). The simplest question that can be posed about the climatic effect of such an influence is: What will be the change in mean surface temperature for a given change in the external or boundary conditions? ("External" is used here in the special sense of being excluded from the internal and interacting processes in the climate model being used. What may be external in one model, such as sea surface temperature or snowcover, may be internal in a more physically comprehensive model.)

To answer this question it is not unreasonable to start by employing a globally-averaged model of the earth and atmosphere, one in which the mean surface temperature and corresponding vertical temperature (and humidity) profiles are related by globally-averaged vertical transfers of sensible and latent heat and radiation, and constrained by a set of assumptions about how these must take place. Radiative-convective models of the sort used by Manabe and Wetherald (1967), Rasool and Schneider (1971), and Ramanathan (1975) are all examples of the globally-averaged approach, in which great attention is usually paid to the calculation of radiative transfer by trace gases in the atmosphere (CO_2, H_2O, O_3, CFMs, etc.), and vertical transfers of heat and water vapor (latent heat) are taken care of by the assumption of a constant lapse rate and relative humidity up to the tropopause. This assumption is justified by the observation that the real atmosphere does seem to adjust itself this way over most of the range of latitudes and seasonal changes—as indeed do the more complex three-dimensional models.

The obvious deficiency of such an approach lies in the fact that it neglects some feedback loops that are almost certainly important, notably the polar ice-albedo-temperature and cloudiness-albedo-temperature loops--plus whatever might change in the ocean circulations. The magnitude of the first of these loops has been estimated by several people, and when included seems to add 25 to 50 percent to the surface temperature response of a globally-averaged (or zonally-averaged) model that does not include it (Schneider, 1975; Cess, 1976; Manabe, App. 2.4, GARP-16, 1975; Lian and Cess, 1977).

Zonally-averaged energy-balanced models that include the latitude dependence of surface temperature, albedo, incoming and outgoing radiation, and so forth, are the next most complex models that have been used for predictions of the second kind. Meridional transport of energy is generally parameterized (empirically) in terms of the meridional temperature gradient. A rather wide range of assumptions concerning vertical transports have been used, and some have even attempted to include cloudiness as an internal parameter. In such models, the polar ice-albedo-temperature feedback loop can be included. Examples of this approach are the pioneering models of Budyko (1969), Sellers (1969), Saltzman (1967), and Adem (1970), and the more recent models of Sellers (1973), Stone (1973), North (1975), Weare and Snell (1974), and Temkin and Snell (1976).

Attempts have been made to introduce the longitudinal dimension into highly parameterized energy-balanced models, but it is not yet clear whether these can tell us much more than the zonally-averaged ones. The next real step upward seems to require that atmospheric dynamics and eddy transports of heat and momentum be considered more explicitly, since then one can begin to study the interplay between continents and oceans and their effects on meridional transport by meridional circulations and planetary scale waves. Early examples of such attempts are those of Eliassen (1952) and Smagorinsky (1964), and others have been made by Dickinson (1971), Saltzman and Vernekar (1972), Kurihara (1970) and Wiin-Nielsen (1970). For a detailed discussion of these various models the reader is referred to Schneider and Dickinson (1974), or a shorter version by the same authors in GARP-16 (App. 2.3, 1975). For reasons that are not apparent, few if any of these highly parameterized dynamic models have been used for climate experiments to determine sensitivities to effects of human activities.

Three-dimensional time-dependent general circulation models (GCMs) of the atmosphere have now been developed at a number of institutions, and these have been so extensively discussed in the literature that we will not attempt a review of them here. [See, for example, NAS (1975) App. B by Gates; Manabe, App. 2.4 in GARP-16 (1975); or Smagorinsky (1974).] The main points that need to be made when these GCM-type models are used for

experiments of the second kind are these: The models need to be run each time long enough so that their ensemble statistics no longer change with time, and the variances of these statistics must be well established so that the experimental "noise" is known (Chervin et al., 1974); it is necessary to make a number of control runs to establish the stability (transitivity) of the model, and preferably a number of perturbation runs must be made also; and, finally, a large amount of computer time must be used.

Some early climate experiments with GCMs have been criticized because not enough attention was paid to the statistical design of the experiment, but considerable advance has now been made in understanding how to use GCMs appropriately (Chervin et al., 1976; Chervin and Schneider, 1976). In most GCM experiments to date, however, the solar radiation is held constant (a perpetual July or January) due to the exorbitant computer costs involved in running them for several years, and this means that many questions relating to the march of seasons cannot yet be properly studied with them, such as the annual cycle of Arctic sea ice and the transitional periods of the Asian monsoon. An even more serious deficiency of most current GCMs is that they do not include a coupled ocean, but sea surface temperature is proscribed--it is an external parameter. This means that there is no overall energy balance, and so they cannot respond properly to a change in heat input to the climate system.

Only one group has done climate experiments with a GCM coupled to an ocean, and in this case the ocean was simulated by a non-circulating "swamp" with no heat capacity (but an infinite supply of water). These experiments by the U.S. Geophysical Fluid Dynamics Laboratory have been reported by Smagorinsky (1974), Manabe and Wetherald (1975), Wetherald and Manabe (1975), and Manabe (App. 2.4, GARP-16, 1975), and we will have occasion to refer to them again.

It can be seen, then, that there is an entire hierarchy of models of the climate system, and many of them have been used in experiments "of the second kind" to show how the system would respond to a given change in an external condition. It is reassuring to see that, when we compare the results of experiments with the same perturbations (for example, one percent more solar radiation, or double the CO_2 content) but using different models, the response is generally found to be either about the same or differs by an amount that can be rationalized in terms of recognized model differences or assumptions. Of course, it is possible that all our models could be utterly wrong in the same way, giving a false sense of confidence, but it seems highly unlikely that we would still be so completely ignorant about any dominant set of processes (see Section 1.2). We must simply recognize and admit where our models are deficient, and then factor that into our statement about the uncertainty in their responses.

Models are, indeed, the only tools we have available now to predict the response characteristics of the real atmosphere-ocean-earth system. In a hundred years or so we may finally know the outcome of our inadvertent "experiment" with the original prototype, but by that time the climate changes, whatever they turn out to be, will have been a *fait accompli*.

2.2 Specific processes

In this section we will take up the various individual processes in the climate system that may be influenced by mankind. In each case we will attempt to make an estimate of the response of the climate system (with emphasis on surface temperature and secondarily precipitation), an indication of the time scale involved in the change, and some measure of uncertainty in our estimate. To be "significant" an artificially induced change of global climate must be larger and more persistent than the natural quasi-random fluctuations that are to be expected in the same time frame, and we will make such a significance test in Section 2.3.

2.2.1 Release of heat

The climate is governed by the heat balance of the climate system, so it is clear that the direct addition of an appreciable quantity of heat in any form will cause a change in climate, notably the mean temperature and probably the atmospheric circulation patterns as well. In some of the large cities of the world, especially those at high latitudes where there is relatively less sunlight, the amount of heat released per square meter is equal to or even greater than the average flux of sunlight absorbed at the surface during the year. However, on a regional scale (order of 10^5 km^2) this ratio is rarely more than a few percent, and on a global basis the total amount of heat released by all of mankind's activities is only slightly more than 10^{-4} of the solar energy absorbed at the surface (SMIC, 1971; Kellogg, 1974; 1975a; 1975b). Such a small fraction as we will see, would have a negligible effect on the total heat balance of the earth.

The future course of human activities and the rate at which this release of heat will increase depends on factors that are hard to assess. In Section 1.3 we discussed the basis for what appears to be a not unreasonable assumption, namely, that societal growth will continue for the next few decades at only slightly diminished rates, but that it will tend to level off in a little more than 100 years. Again, we refer to Figure 2 as a way of visualizing such a scenario and its time scale, keeping in mind the empirical fact that per capita energy consumption and per capita gross national (or world) product are linearly proportional to a good approximation (Singer, 1975).

Let us see what the "leveling off point" suggests in terms of total heat release. If we take a 20 billion population (5 times the present) and an average per capita energy demand of 20 kw (roughly 10 times the present world average, and twice that of the United States), the total is 4×10^5 Gw, or 0.5 percent of the solar energy absorbed at the surface. Such a level, it appears, could hardly be attained prior to 2100 AD (if at all)--and we will not attempt a projection beyond that.

This large amount of heat would presumably be released over the continents where the people will be, and that would give an uneven distribution of heating as seen on a global scale and produce marked regional effects and changes in the large-scale circulation patterns (Washington, 1972; Llewellyn and Washington, 1977). We can, however, assume that this heat will end up being more or less evenly distributed in a given hemisphere and then use our climate models to estimate the effects that this would have on mean surface temperature. Since most of the heat will be released at or near the surface, the additional heat can be considered (in these model experiments) as if it were an increase in the total amount of solar radiation reaching the surface. There is not precise agreement among the various climate models (Schneider and Dennett, 1975; Gal-Chen and Schneider, 1976), but the current set of models seem to converge quite well on the answer that a 1 percent increase in the heat available to the system would result in about 2°C increase in the mean surface temperature, probably within better than a factor of two (Wetherald and Manabe, 1975; Budyko, 1969; 1972; Sellers, 1969; 1973; Saltzman and Vernekar, 1972). Thus, the average surface temperature increase might be about 1°C <u>by the end of the next century</u> due to the direct release of heat.

All of the climate models that we have cited relating heat input to the system to surface temperature take into account the polar ice-albedo-temperature feedback mechanism, and they show a marked increase in the sensitivity of the polar regions. The change at latitudes above about 50°, therefore, will be larger than the 1°C, and in the polar regions can be expected to be 3 to 5 times larger. This increased sensitivity of the polar regions to climate change has been well recognized from studies of the real atmosphere as well as from model experiments (eg., SMIC, 1971; Lamb, 1972; van Loon and Williams, 1976a; 1976b; Budyko, 1971; Borzenkova, 1976). That is a point that will have to be stressed again.

2.2.2 Carbon dioxide

Since the beginning of the Industrial Revolution more than a century ago we have been taking carbon out of the earth in the form of coal, petroleum, and natural gas and burning it, in the process making carbon dioxide and water vapor--plus heat, which is of course our main reason for doing it. Of the carbon dioxide that has emerged from countless chimneys and exhaust pipes, about half is still in the atmosphere and the other half has been dissolved in the oceans or has gone into the earth's biomass--the biomass being mostly the forests.

The carbon dioxide in the atmosphere has risen from an estimated 280 or 290 parts per million by volume (ppmv) to the present 325-plus ppmv, and it is estimated, based on the early studies of Revelle and Suess (1957) and Bolin and Ericksson (1959), that it will reach some 380 to 390 ppmv by 2000 AD (Machta, 1973; Machta and Telegades, 1974; Ekdahl and Keeling, 1973; Bacastow and Keeling, 1973; Broecker, 1975), and may double by the next mid-century, even assuming a slackening in the rate of increase of fossil fuel consumption (Bacastow and Keeling, 1973; Baes _et al._, 1976).

Figure 3 depicts the past history of the carbon dioxide concentration and how it is expected to increase in the future. It will be noted from the records at Point Barrow, Mauna Loa, and the South Pole that there is a couple of years' lag between the northern hemisphere (where most of the carbon dioxide is released) and the southern hemisphere, as would be expected because of the slow exchange of air between hemispheres. Also, the slope of the curves are not exactly constant, there being a slackening in the mid-1960s followed by an acceleration in the 1968 to 1971 period. Since worldwide release of carbon dioxide cannot have changed much from its steady rise of about 4 percent per year (SCEP, 1970; Baes _et al._, 1976), the explanation for these fluctuations in carbon dioxide rate of increase _probably_ lies in fluctuations of the rate of uptake by the oceans (Bacastow, 1976).

The chief concern that we have with this changing component of the atmosphere is its effect on the heat balance, since carbon dioxide is virtually transparent to solar radiation but absorbs outgoing terrestrial infrared radiation in several infrared bands, radiation that would otherwise pass through the atmosphere and escape to space. The additional carbon dioxide enhances the absorption of this radiation, thereby warming the lower atmosphere, and reradiates part of it back downward, thereby warming the surface. The result, therefore, of an increase in carbon dioxide is an increase in surface temperature, accompanied by a corresponding decrease in stratospheric temperature that keeps the total outgoing infrared radiation at the top of the atmosphere constant (Schneider and Kellogg, 1973).

There have been a number of model calculations to show the influence of carbon dioxide on the surface temperature, some globally averaged one-dimensional models such as that of Manabe and Wetherald (1967), and some latitude-dependent and with the oceans taken into account crudely (Sellers, 1974; Manabe and Wetherald, 1975; Manabe, App. 2.4, GARP-16, 1975). These various results have been reviewed most recently by Schneider (1975) and Budyko and Vinnikov (1976). A representative set of estimates follows in Table 1 (and we have more or less arbitrarily set the degree of uncertainty at plus or minus a factor of two, even though the model results are now converging better than that).

These surface changes, it should be emphasized, refer to the weighted average (by surface area) for the globe. Both observed changes of climate and climate models indicate that at high latitudes, above about 50° latitude, any climate change would be expected to be larger, and in the polar regions from 3 to 5 times larger than an average change such as those shown in the table (perhaps even more in winter) (SMIC, 1971; Sellers, 1974; Manabe and Wetherald, 1975; van Loon and Williams, 1976a; 1976b; Borzenkova _et al._, 1976).

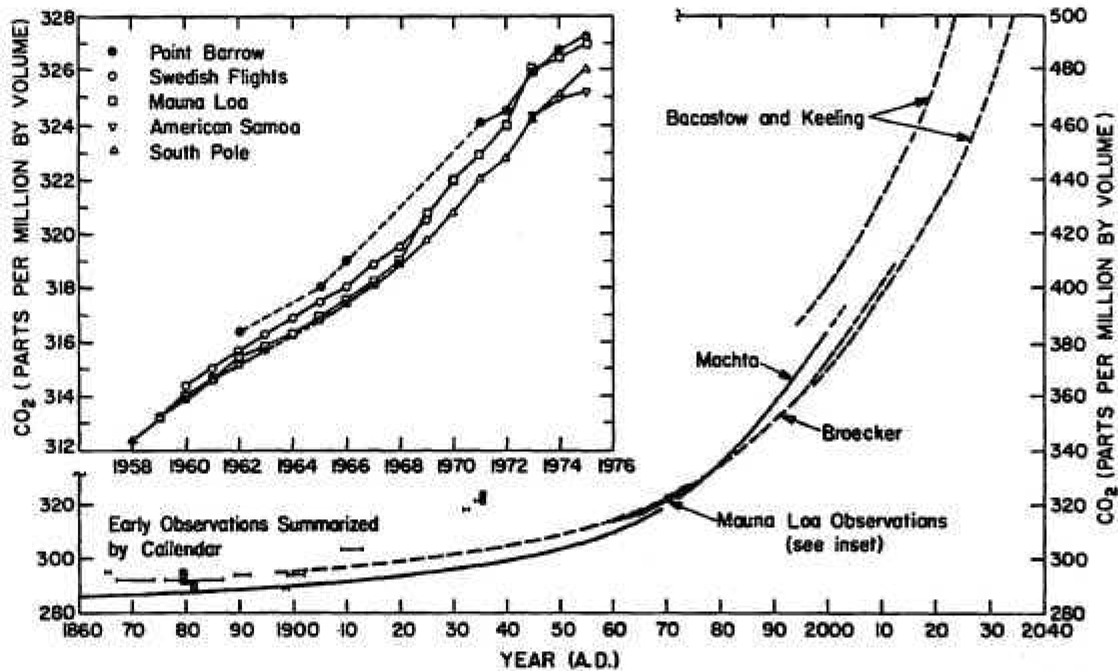

Figure 3. The record of carbon dioxide concentration from 1860 to 1975, measured at several locations, and some estimates of future trends. The early data were critically reviewed by Callendar (1958) and subsequently reevaluated by Barrett (1975). The current series of observations for Mauna Loa are those reported by Keeling et al. (1976a) and C. D. Keeling (private communication), for South Pole by Keeling et al. (1976b) and Keeling (private communication), for American Samoa and Point Barrow by NOAA (1975) and T. Harris (private communication), and for the Swedish aircraft observations by Bolin and Bischof (1970). Note that the carbon dioxide concentrations are given in terms of the "adjusted index values" (for the sake of continuity with the earlier data); it may be necessary to adjust these values upward by about 3 to 4 ppmv, according to Keeling et al. (1976a), to obtain the correct mole-fraction, but this would not affect the slopes of the curves. The model calculations predicting future carbon dioxide increases by Machta (1973), Broecker (1975), and Bacastow and Keeling (1973) all take account of the takeup of anthropogenic carbon dioxide by oceans and the biomass (but in somewhat different ways), and assume a quasi-exponential increase in the rate of burning of fossil fuels (notably coal) in the next half-century or more. It is expected that in this time period about half of the new carbon dioxide released will remain in the atmosphere; and due to the slow mixing of deep ocean waters with the upper layers the decay time of the added carbon dioxide, were we to stop producing it, is estimated to be 1000 to 1500 years.

Table 1

Effects of Adding Carbon Dioxide to the Atmosphere

Factor of Change of Carbon Dioxide from Present	Expected Time for Change to Occur	Mean Surface Temperature Increase
+25%	2000 AD	0.5 to 2°C
+100%	2050 AD	1.5 to 6°C

One question is frequently raised about the continued escalating use of fossil fuels, as envisioned in this scenario, and that is their availability. While natural gas is expected to become much less easily available by the turn of the century, and some sources of petroleum will have also been nearly exhausted, the world's coal reserves are so large that, even at an increased rate of consumption, they will probably last for several centuries--though it may be harder and therefore more expensive to dig it out as time goes on (see, for example, Hubbert, 1971; Singer, 1975; Kahn et al., 1976; Häfele, 1974; Weinberg and Hammond, 1970; SCEP, 1970). It is estimated that if all the economically recoverable fossil fuel were eventually burned in the next few centuries the atmospheric CO_2 content would rise to 5 to 8 times its pre-Industrial Revolution value (Keeling, 1977; Singer, 1975; Baes et al., 1976; Siegenthaler and Oeschger, 1977).

While the model calculations of the mean surface temperature increase corresponding to a given increase in CO_2 concentration have only been carried to the point of a doubling of CO_2, the relationship appears to be approximately logarithmic. Thus, for every doubling one would expect another 2.5 to 3°C warming. Some scenarios have extended the calculation beyond our time frame, and if the rate of burning of fossil fuel continues to escalate (as at present) the second doubling of CO_2 will occur before 2100 AD (Keeling, 1977; Siegenthaler and Oeschger, 1977), and that would produce a 5 or 6°C warming. Recall, again, that polar temperature rises would be several times the global average.

The main sink for CO_2 in the longer run will be the oceans (Keeling, 1973; 1977; Bolin, App. 8, GARP-16, 1975; Oeschger et al., 1975), since the forests of the world cannot go on increasing indefinitely--on the contrary, they are quite possibly being cut down faster than they can grow. The oceans contain about 60 times more CO_2 than the atmosphere, but in order for them to come into a new equilibrium with a larger atmospheric content there has to be an exchange between the upper levels of the ocean (variously taken to be 100 to 1000 m deep on the average) and the deep ocean water. This process, it has been estimated, takes at least 1000 years, and Keeling (1973; 1977) estimates a decay time for atmospheric CO_2 of 1500 years. (It would not matter for our purposes if he were wrong by a good many hundred years.) Thus, even if, by some determined and unlikely measure, we could stop releasing CO_2 from fossil fuel in the next century, we would still find the incremental CO_2 lingering in the atmosphere at a very slowly diminishing concentration for many centuries.

In the brief discussion above we have not attempted to give the complete picture of the carbon cycle, and especially the processes that account for takeup of CO_2 by the upper ocean layers and the subsequent exchange of this water with the deep ocean reservoir. The interested reader is referred to, for example, Bolin, App. 8 in GARP-16 (1975) or Oeschger et al. (1975) for a critical discussion of the subject.

2.2.3 Chlorofluoromethanes

A contaminant added to the atmosphere in the past few decades by mankind in large quantities, one that has been most notorious for its possible effect on the ozone layer in

the stratosphere, are the chlorofluoromethanes, referred to as FC-11 ($CFCl_3$) and FC-12 (CF_2Cl_2). (They are sometimes also referred to as "freons," but that is a trade name.) These gases, used both for refrigerants and as aerosol propellants, are extremely stable, nontoxic, and persist in the troposphere for very long periods of time (about 40 yr mean residence time for FC-11, 70 yr for FC-12), and the observed buildup of the FCs in the lower atmosphere suggests that virtually all of the gas released to date can still be found resident in the troposphere. There are probably small sinks at the surface and in the troposphere, and there is a long-term sink in the stratosphere, since those molecules that diffuse upward into the stratosphere are broken down by the ultraviolet radiation there (Crutzen, 1974; Rowland and Molina, 1975; Wofsy et al., 1975; NAS, 1976).

While we will not comment here on the effect of these compounds on the ozone layer (though this is, in a broad sense, a change of the environment), it turns out that they have a direct effect on the temperature balance of the atmosphere that has only recently been identified (Ramanathan, 1975). Like carbon dioxide, the FCs have absorption bands in the part of the infrared "window" between about 8 and 15 μm where there is relatively little water vapor absorption. Thus, the FCs prevent some of the infrared terrestrial radiation from the surface that would otherwise escape to space from passing through the lower atmosphere. The result is an increase in the surface temperature and a corresponding decrease in the stratospheric temperature.

The present mean tropospheric concentration of total FCs is about 0.2 parts per billion by volume (ppbv), and calculations by Crutzen and others indicate that, if FCs continued to be produced at the 1973 production rates, FC-11 would reach about 0.32 ppbv and FC-12 about 0.58 ppbv by 2000 AD, and would level off in the middle of the next century at about 0.7 and 1.9 ppbv respectively (NAS, 1976, Table 5). This quasi-steady state would result in a decrease of outgoing infrared radiation from the troposphere of some 0.3 percent and an associated mean surface temperature increase of 0.5°C, based on Ramanathan's model calculations (which we will take to be correct to better than a factor of two). If, on the other hand, the worldwide production rate of FCs continues to increase at about 10 percent per year, as it has in the past (Howard and Hanchett, 1975), and the total concentration of FCs were to increase to 3.5 ppbv, then the temperature rise would be about 1°C. We cannot say exactly when this would be (since it would depend on the actual production rate), but it is not inconceivable that it could occur as early as 2000 AD.

Projections of the future use of FCs will depend very much on the passage of legislation (or spontaneous reaction by industry or consumer resistance) in various countries limiting the use of FCs as propellants in spray cans. At present roughly one half of the production is in the United States, where such legislation is being seriously considered. In any case, it is likely that the FCs will continue to be used extensively as refrigerants, for which they are probably ideally suited, and it would be difficult (if not unnecessary) to prevent the continued escape of some FCs into the atmosphere. The issue of whether or not there will be a worldwide ban on their use will probably rest with their effect on stratospheric ozone rather than with their effect on climate, since there are identifiable biomedical effects of decreasing ozone (and increasing solar ultraviolet radiation) that are probably cause for real concern (NAS, 1976).

2.2.4 Nitrous oxide and other infrared absorbing gases

We have noted the marked increases in surface temperature that can be produced by large-scale releases of carbon dioxide and the chlorofluorocarbons, the effect being due to their ability to absorb infrared radiation in the atmospheric "window" and their long persistence in the troposphere. This suggests that we should be alert to the buildup of any other trace gases that have similar properties, and there are a great many of them.

One such trace gas is nitrous oxide (N_2O), which is mainly maintained at its present tropospheric concentration of about 0.28 ppmv by biological decay and conversion processes taking place in soil and in the oceans--processes referred to as "denitrification." It has been suggested that the increasing use of nitrate fertilizers by mankind may accelerate the biological production of N_2O and raise its atmospheric concentration (Crutzen, 1976; McElroy et al., 1976), with implications for both surface temperature increase and stratospheric ozone concentration decrease. The amount of this increase in N_2O concentration is still uncertain, since estimates vary from a trivial increase to as much as a factor of 2 in the early part of the next century. The latter would produce a warming on the order of 0.5°C (Yung et al., 1976), but this may be considered as an estimate on the high side until we understand the global nitrogen cycle better, and specifically the relative productions by ocean and land (soil) biota.

As an example of the complex interrelationships that one uncovers when one looks under one of these climatic stones, we will mention the fact that in the denitrification process by soil organisms the ratio of N_2 to N_2O produced depends on soil acidity. In slightly alkaline soil only about 5 percent of the gaseous nitrogen compounds released is N_2O, but in acid soil it can increase to over 20 percent. Thus another human activity that we will deal with in the next section, the production of SO_2 and sulphates from burning fossil fuels, will add still further to the production of N_2O as "acid rain" increases the soil acidity downwind from the industrialized areas of the world. However, so far as we know no one has pursued this point to determine how important it could be.

2.2.5 Aerosols

Another product of human activity is the particles that are produced by industry, power generation, automobiles, space heating, slash-and-burn agricultural practices, and so forth. These particles, commonly known as aerosols, are obvious additions to the atmosphere of the large cities of the world, where they are largely produced by a combination of coal burning (which results in both soot and sulphur dioxide, the latter becoming sulphate particles after a short time) and the creation of particles from unburned hydrocarbons in the atmosphere by photochemical reactions in the presence of solar ultraviolet radiation. Such secondary particles (sulphates and hydrocarbons) tend to be somewhat smaller in size than the directly produced smoke or soot particles, though after they have existed for a while in the air they attach themselves to each other and to the larger particles, forming particles that are a combination of both--and it has been demonstrated that the nuclei around which secondary particles form are often soot particles (NSF, 1976).

There is little doubt that since the turn of the Century there has been an increase in the rate at which aerosols have been produced by mankind, particularly in the more industrialized countries (see, for example, SMIC, 1971; Pivovarova, 1970; Machta and Telegadas, 1974; Ellsaesser, 1975; Bryson, 1974; Cobb and Wells, 1970; Budyko and Vinnikov, 1973; Mitchell, 1974; 1975; Dyer, 1974), and many non-urban stations (but definitely not all) have recorded some long-term upward trends in the total aerosol content. If this is so, then one must ask how extensive the anthropogenic aerosols really are, and what their effect will be on the regional or global radiation balance if the upward trend were to continue. (The possible influence of agriculture on wind-blown soil (and sand) aerosols will be touched on at the end of this section.)

Aerosol particles can both scatter and absorb sunlight, and they also absorb and reemit infrared radiation to a more limited extent. When a non-absorbing particle scatters solar radiation some of the scattered radiation will be directed upward as well as downward, and the upward component will be lost to space. This results in less sunlight reaching the earth and an increase in the net albedo of the atmosphere-earth system, which would cause a net cooling. However, when a particle absorbs some of the solar radiation it heats the particle and the air around it, and the effect of this is to reduce the net albedo. Theory tells us that in order to decide whether lower atmosphere aerosols cause an increase in the net albedo (cooling) or a decrease (warming) we must take into account

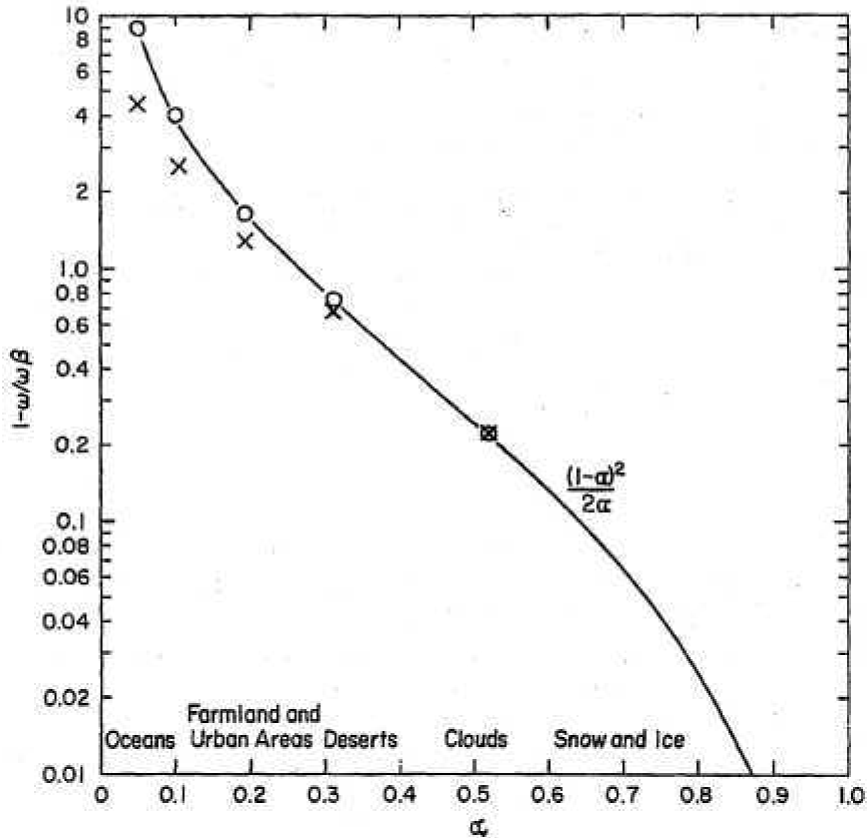

Figure 4. Critical ratio of solar radiation absorption to average upward-scattering cross sections [$(1-\omega)/\beta\omega$ or a/b] as a function of surface albedo (α). The curve with circles represents results of the radiation model of Chýlek and Coakley (1974), which takes account of solar radiation only; for conditions represented in the domain above this curve there will be a decrease in the net earth-atmosphere albedo as a result of the aerosols, and consequently a warming. The "x" symbols represent a typical case, calculated by Coakley (private communication), in which both solar and infrared effects are combined, showing that the infrared effects tend to enhance the warming influence of aerosols.

the ratio of the particle absorption to its backscatter, which we will call a/b, and also the albedo of the underlying surface (Mitchell, 1971a, 1971b; Schneider and Kellogg 1973; Chýlek and Coakley, 1974; Coakley and Chýlek, 1975; Weare et al., 1974). When aerosols of a given a/b are over a dark surface, such as the ocean, they are more likely to increase the net albedo than when they are over a light surface, such as a snowfield or a low cloud deck--or over land generally. This relationship is summarized in Figure 4, calculated by Chýlek and Coakley (1974).

There has been a widely shared belief that anthropogenic aerosols generally cause a cooling, the argument being that when spread evenly around the earth their effect over the dark oceans is to increase the albedo and thereby prevent some of the sunlight from being absorbed by the earth-atmosphere system (Rasool and Schneider, 1971; Yamamoto and Tanaka, 1972; Bryson, 1974; Bryson and Wendland, 1975; Bolin and Charlson, 1976; Budyko and Vinnikov, 1973; Mitchell, 1975). Recently, however, it has been pointed out that most of these anthropogenic aerosols exist over the land, near where they are formed, and that they are sufficiently absorbing to reduce the albedo rather than increase it (Kellogg et al., 1975; Eiden and Eschelbach, 1973; NSF, 1976; Weiss et al., 1976; Brosset, 1976).

In Figure 5 (adapted from Kellogg et al., 1975) a theoretical global distribution of mankind's industrial aerosols is shown, assuming that the production in each country is proportional to gross national product, and that the aerosols drift with the surface winds and remain in the atmosphere with a mean residence time of 5 days before they are rained out or washed out or directly deposited at the surface (Moore et al., 1973; Martell and Moore, 1974). It will be noted that their distribution is very uneven, being mostly confined to the industrialized regions of the northern hemisphere, though a certain portion does drift out over the Atlantic and Pacific Oceans, and a considerable part of Europe's "gross national pollution" drifts over North Africa, particularly in the wintertime. (Details of this analysis are given in the referenced report.) These industrially related aerosols absorb more solar radiation than natural aerosols, and their a/b values are generally large enough so they will probably lower the albedo of the atmosphere-earth system over the land, and thereby cause a warming (See Figure 4). However, largely due to our lack of quantitative knowledge of the optical characteristics of these aerosols and their distribution, we cannot yet assign any number to this warming effect. (This problem is discussed by Junge in App. 9 of GARP-16 (1975).)

There are other effects that aerosols may have on the climate of a region, especially its rainfall. In a later section we will discuss their role as condensation and freezing nuclei, which may be significant; and another effect that may be significant is their influence on the stability of the lower layers of the atmosphere. Since, as has been pointed out, they absorb a certain amount of solar radiation, the upper part of a low-lying aerosol layer will be warmed, and the absorption and scattering processes will cause a decrease in the solar radiation reaching the ground. The result is a warming of the upper part of the aerosol layer (in the daytime) and a decrease in the rate of warming at the ground, and this causes the stability of the atmosphere near the ground to be larger than it would be in the absence of the aerosol particles. Bryson and Baerreis (1967) have suggested that the radiational effect of aerosols may decrease convective-type precipitation, especially in sub-tropical places such as Northwest India; and Wang and Domoto (1974) and Atwater (1975) have investigated the effect theoretically. Unfortunately, again we do not yet have enough information about the optical properties of aerosols to make a quantitative evaluation of this influence on rainfall.

Before leaving the effects of anthropogenic aerosols on the radiation balance, there is one more point that may be important but has often been overlooked. Clouds have a fairly high albedo or reflectivity, as is obvious, but theoretical calculations involving the scattering and absorption of plain water droplets indicate that they ought to be more reflective than they are in fact (Twomey, 1972; Liou, 1976). The difference is thought to be due to the presence of absorbing aerosol particles, and the decrease in reflectivity will occur whether the particles are included within the cloud droplets or are floating between them (Ackerman and Baker, 1977). Since the apparent reduction of reflectivity is

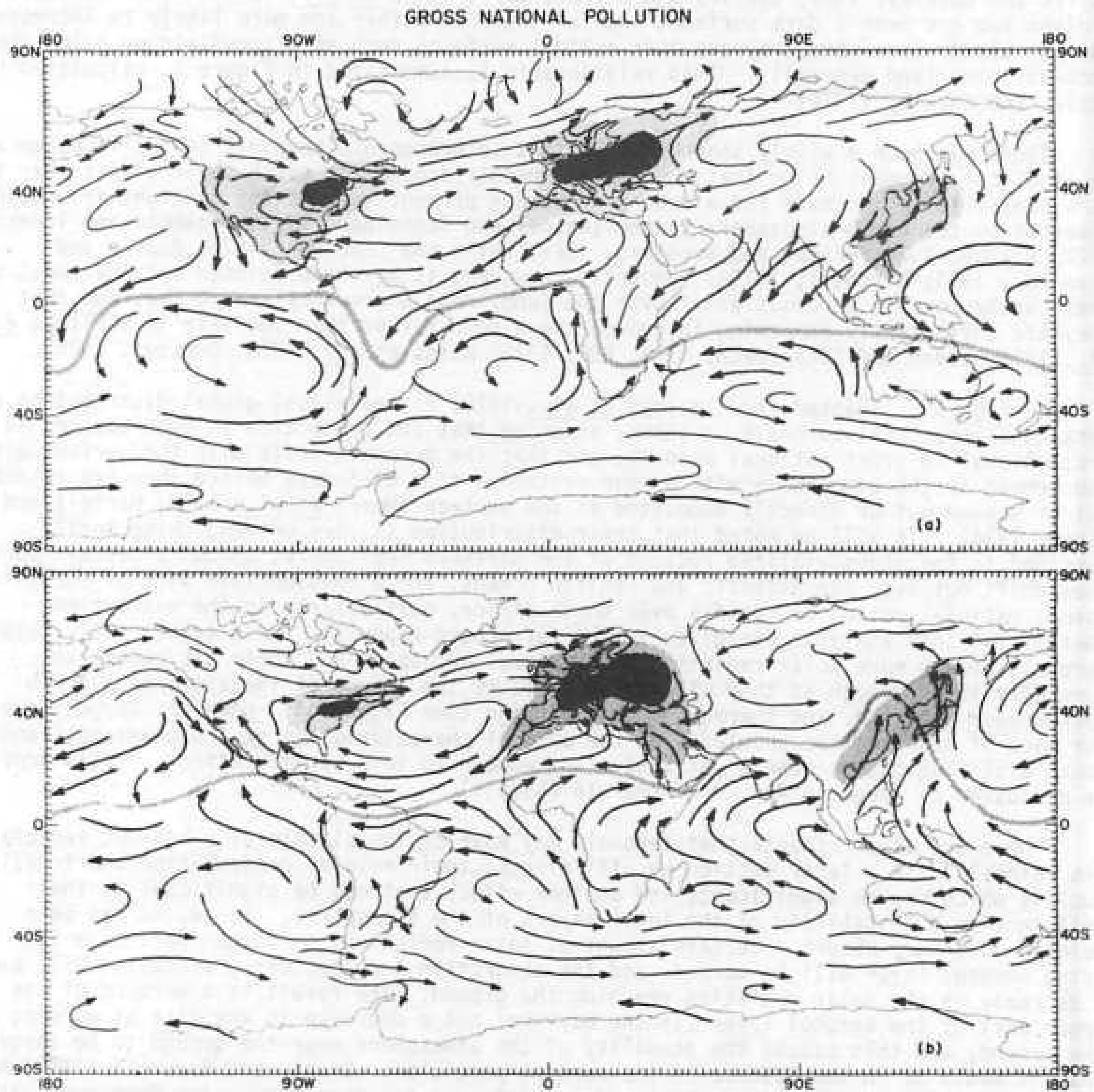

Figure 5. Estimated global distributions of anthropogenic (industrially-related) aerosols, based on the assumptions that production rate is proportional to gross national product of each country, a mean residence time of 5 days, and transport by surface winds [taken from Lamb (1972)] for January (a) and July (b).

quite marked (10 to 20%), it is clear that any increase in absorbing aerosols will cause additional absorption of solar radiation by the clouds, and this represents still another source of heating if anthropogenic aerosols are added to the lower atmosphere.

Industrial aerosols, probably because they are so very obvious to the eyes of the population in large cities, have been the target of vigorous attempts to control them. The result is that in many cities of the world the aerosol content, particularly of larger particles, has shown a definite decrease (Ellsaesser, 1975; NOAA, 1975). The same cannot in general be said for the total aerosol content of the atmosphere observed in Europe and the eastern United States, where secondary aerosol production of smaller sub-micron particles, especially sulphates from the sulphur dioxide produced by burning high sulphur fuels, have become a dominant factor in regional air pollution (Weiss et al., 1977). It should be noted that the practical problems posed in these regions by the ecological and health effects of increasing quantities of sulphate particles probably far outweigh their influence on the regional climate (e.g., Bolin et al., 1971), but that is beyond the scope of this report.

When we consider "anthropogenic aerosols" the fact cannot be ignored that mankind's agricultural practices and the grazing of domesticated animals has an effect on the amount of wind-blown mineral dust or soil. Exposing previously vegetated ground allows the wind to raise fine particles (notably Loess, which consists of material already carried by the wind in earlier times), and Flohn (GARP-16, App. 1.2, 1975; private communication) estimates that human activities may now account for a major source of mineral dust in the air due to the large areas under cultivation (about 35 x 10^6 km^2) or subject to overgrazing (about 5 x 10^6 km^2) (See also SMIC, 1971; Bryson and Baerreis, 1967). Wind-blown particles are generally less absorbing of solar radiation than industrial or slash-and-burn particles (Grams et al., 1974), so the above arguments about the probable warming influence of industrial aerosols may not apply to such mineral dust particles. We know of no quantitative estimate of their overall influence on global climate.

2.2.6 Changes affecting the precipitation process

a) Condensation and freezing nuclei

Many of the aerosols produced by industry have the property of acting as condensation nuclei or freezing nuclei--that is, they can initiate the formation of cloud droplets or hasten the freezing of cloud droplets at temperatures below 0°C. Notable among freezing nuclei sources are steel mills and lead compounds from automotive exhausts. Also, the most common kind of aerosol produced by burning coal and fuel oil, sulphates, are very good condensation nuclei.

While the effect of these condensation and freezing nuclei on the precipitation process are bound to be significant regionally, and while it has been clearly demonstrated that precipitation has indeed increased down-wind from certain cities such as Saint Louis, Chicago, and Paris (Dettwiller and Changnon, 1976), it is difficult to assess quantitatively the effect of these activities even on a regional scale. We must merely, for the time being, recognize this potential effect as a very real one (Hobbs et al., 1974; Schaeffer, 1975).

b) Krypton-85 from nuclear power generation

There are a number of radioactive gases that are released into the atmosphere from nuclear power plants and from the plants that reprocess nuclear fuel. Notable among these are tritium, with a half life of 12.5 years, and krypton-85, with a similar half life of 10.7 years. Krypton-85 is a noble gas that remains more or less permanently in the atmosphere without undergoing any chemical combinations, so it builds up in the atmosphere, subject only to its slow radioactive decay.

When a krypton-85 atom disintegrates it produces an energetic electron that ionizes the air in its vicinity. There are other sources of ionization in the lower atmosphere, such as cosmic rays and the radioactive products of uranium, notably radon and its decay products. As the concentration of krypton-85 builds up in the troposphere, assuming a continued increase of the use of nuclear power in the world, the ionization from this source will begin to compete with all the other natural radioactive and cosmic ray sources. One estimate has been made of this effect, and the prediction is that there will be a 10 to 15% increase in the total ionization or conductivity of the lower atmosphere in about 50 years (Boeck *et al.*, 1975; Boeck, 1976).

Such a change in the ionization of the atmosphere would have little or no direct effect on living things that we can identify (the level of krypton-85 discussed by Boeck is 100 times less than the maximum permissible airborne concentration in unrestricted areas), but if the conductivity of the lower atmosphere is increased one may expect that there will be an effect on the fair weather electric field, which is maintained by all the thunderstorms of the world acting together as a direct current generating mechanism. This electrical system is in effect a global spherical condenser, with a positive charge in the upper atmosphere (the outer shell, which is a good conductor) separated from a negative charge on the earth (the inner shell) by the relatively non-conducting lower atmosphere. The lower atmosphere is not a perfect insulator, however, and a steady leakage of current takes place from upper atmosphere to the ground that must be just balanced by the upward countercurrents produced in the thunderstorms. If the conductivity of the lower atmosphere were increased due to krypton-85 ionization, as suggested by Boeck, then the leakage between the two regions would be increased and (as when a condenser is partially discharged) the electric field would be decreased--unless the thunderstorm generators worked correspondingly harder. Actually, there is good reason to believe that the efficiency of the thunderstorm charge separation process depends in part on the fair-weather electric field (Sartor, 1969), so a decrease in this electric field would probably decrease the rate at which the global generating mechanism worked to maintain it--a positive feedback.

Taking this argument one step further, it is generally believed that the process that initiates rain formation, especially in thunderstorms, is enhanced by the existence of strong electric fields in the clouds, and these electric fields in the clouds (closely related to the global recharging processes just discussed) are activated in part by the fair weather electric field that was there before the cloud formed (Sartor, 1967; 1969). Thus, it has been hypothesized that a decrease in the fair weather electric field would decrease the rate of electric field generation in clouds, and that this in turn would result in a decrease in the rate of formation of precipitation and perhaps a weakening of the cloud dynamical processes as well (Ney, 1959; Vonnegut, 1963; Kellogg, 1975c; Markson, 1975).

Unfortunately, these processes are not understood quantitatively, and it is impossible at this time to assign any value to the effect of an increase in conductivity or a decrease in the fair weather electric field on precipitation--though we would guess that it would be a *negative* effect. Any such change on a global scale would also affect the heat balance, since thunderstorms account for a major part of the vertical exchange of heat and momentum at low and middle latitudes (Palmén and Newton, 1969).

2.2.7 Patterns of land use

There are many ways by which mankind can influence the heat balance of the earth, and the one that he has been working at longest is the alteration of patterns of vegetation. When a forest is cleared for a pasture or wheat field the result is an area that generally reflects more sunlight, since crops and grassland are usually less absorbing than trees. The same is true when nomadic tribesmen allow their cattle or (especially) goats to overgraze on marginal land, since the destruction of vegetation markedly increases the reflectivity of the surface (SMIC, 1971; Glantz and Parton, 1975; Eckholm, 1975; Bryson and Baerreis, 1967).

Such changes in the solar radiation absorbed by the surface must certainly have an effect on the heat balance and climate of a region, and influence its precipitation as well as its mean temperature (Otterman, 1974; Charney et al., 1975; Charney, GARP-16, App. 2.6, 1975). A secondary effect is very likely to be the increase in windblown soil and sand (discussed in Section 2.2.5), which also affects the radiation at the surface and the stability of the atmosphere above it (Bryson and Baerreis, 1967).

So far as we know, there has never been a comprehensive worldwide inventory of this kind of effect, though we do know that some regional surface changes have been and will be very extensive (SMIC, 1971; Newell, 1971; Bryson, 1974). Flohn (GARP-16, App. 1.2, 1975) has made global estimates of some parts of the problem, such as the energy impact of the conversion of tropical rain forest to cropland and the effect of tropospheric dust due to vegetation destruction, and this appears to be a good start. While we do not know how much of a cumulative effect all these changes have had on our climate, our belief is that it has not been as extensive as some of the other effects that have been described.

2.3 Summary of mankind's influences on climate together with their time scales, and a comparison with nature

We have mentioned a number of anthropogenic causes for climate change in terms of their effects on the mean temperature of the surface, and Table 2 summarizes these effects. To a first approximation they can probably be considered as additive, because they represent small fractional changes (and therefore follow more or less linear relationships, though for much larger changes some of the effects must definitely become non-linear).

The last column of Table 2 indicates the expected rates of change of temperature, and we have presented them in order to make a comparison with the natural rates of change of temperature that would be expected based on the statistics of past changes. If an anthropogenic change is much smaller than natural fluctuations it is difficult--if not impossible with our current ignorance of the causes of such fluctuations--to distinguish it from the natural "noise." On the other hand, if it is larger than the expected natural fluctuations its "signal" should be fairly evident (Broecker, 1975; Mitchell, 1977).

A recent report by the U.S. National Academy of Sciences (NAS, 1975) contains a rough harmonic analysis of the mean temperature record of the past several hundred thousand years, and this is presented graphically in Figure 6. It can be seen that the long 100,000-yr period has a large amplitude (4°C) but produces a very gradual rate of change, with a maximum of only ± 0.0025°C decade^{-1}; and, on the other hand, the shorter 100- and 200-yr periods have small amplitudes (0.5°C) but produce relatively rapid rates of change, with maxima of ± 0.15 and ± 0.075°C decade^{-1}, respectively. In the decade of the 1970s the average natural rate of change is expected to be -0.154°C decade^{-1}. According to this analysis the rate of change cannot be more than ± 0.257°C decade^{-1}.

There are a number of potential pitfalls in applying this kind of statistic, the main ones being (a) the assumption that there are such harmonics in the paleoclimatic record when it is only of finite length (which is borne out by the plethora of "discoveries" of other periodicities in other climatic records coupled with the suspicion that they cannot all be real (e.g., Aaby, 1976)), (b) the uneasy realization that we have no good explanation of any but the longer periods (which are in rough agreement with the Milankovitch (1930) hypothesis relating climate change to regular modulations of the earth's spin axis and orbit around the sun), and (c) the rather clear evidence that there have been sudden anomalies in the climate (always, it seems, in the direction of a very rapid cooling).

The last point is borne out in the upper part of Figure 6, which shows a particular record obtained by Nichols (1974; 1975), based on studies of ancient pollens in peat deposits at six locations across northern Canada, the dating being done by ^{14}C. From pollen counts one can derive the relative abundances of various kinds of shrubs, grasses, lichens, and trees, and this in turn indicates the position of the tree line and the mean

Table 2

Summary of Anthropogenic Influences on the Global Mean Surface Temperature

Effect of Mankind	Time Period for the Effect to Occur	Influence on Surface Temperature (°C)	Rate of Change Toward the End of the Time Period (°C/decade)
Raising the carbon dioxide content of the atmosphere.	+25% by 2000 AD +100 by 2050 AD	+0.5 to 2[a] +1.5 to 6[a]	0.2 to 0.8 0.3 to 1.2
Adding chloro-fluorocarbons to the tropo-sphere.	0.8 ppbv by 2000 AD[b] 2.5 ppbv by 2050 AD[b] 3.5 ppbv by 2000 AD[c]	0.1 to 0.4[d] 0.25 to 1[d] 0.4 to 1.5[d]	0.04 to 0.2 0.02 to 0.1 0.2 to 0.8
Raising the nitrous oxide content of the atmosphere.	+100% to 2050 AD	0.25 to 1[e]	0.02 to 0.1
Adding aerosols to lower troposphere.	?	Heating[f]	?
Direct addition of heat.	50-fold increase by 2100 AD	0.5 to 2	0.05 to 0.2[g]
Patterns of land use.	?	?	?

a. See Table 1.

b. Assuming continued FC production at 1973 level (NAS, 1976).

c. Assuming a 10% per year increase in FC production rate (NAS, 1976).

d. Estimate by Ramanathan (1975), and reviewed and extended by NAS (1976).

e. Estimated by Yung et al. (1976). This now appears to be an upper limit on the possible increase of N_2O in this time period.

f. It is not clear whether the upward trend in anthropogenic aerosols will continue-- it will depend to a large extent on control of sulphur-dioxide emissions, which will probably have to be reduced in some areas.

g. Estimated under the assumption that energy production would continue to grow as the product of the two central curves in Figure 2. In this case the total effect (about 1°C) would be more significant than the rate of change because it builds up over a fairly long period.

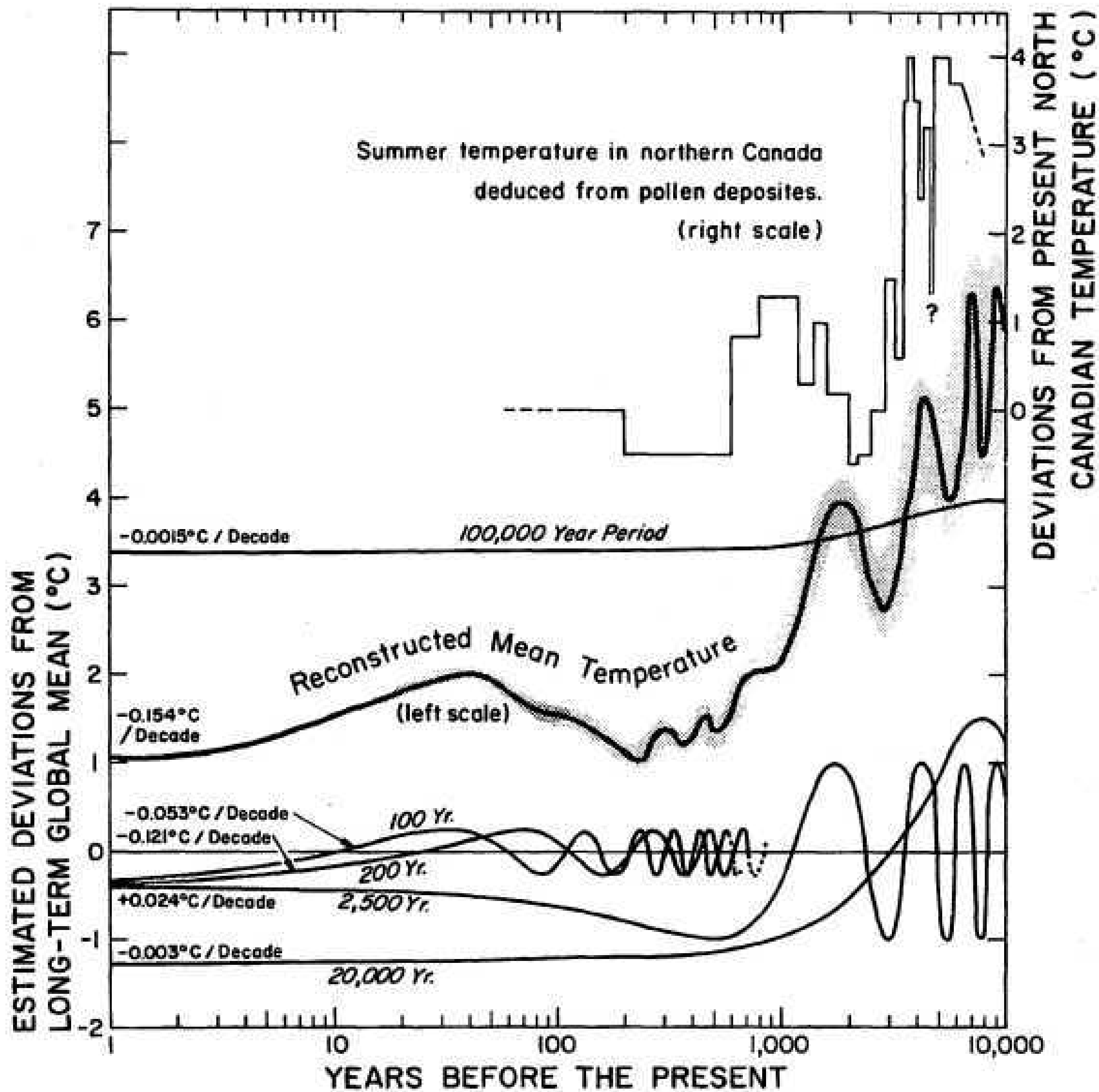

Figure 6. A review of the mean surface temperature changes during the past 10,000 years (lower part, left-hand scale). This is intended to show the general features of the changes; the five periodic functions (with periods from 100 to 100,000 years) from which the mean temperature was reconstructed were derived from a wide variety of paleoclimatic records (NAS, 1975), no one of which can be considered as entirely representative. It will be noted that the shorter-period fluctuations largely account for the rate of change (noted at the left end of each curve), while the longest-period fluctuation has the largest amplitude and largely accounts for the major alternations between the ice ages and interglacials. The temperature record for northern Canada (upper part, right-hand scale), obtained by Nichols (1974; 1975) from studies of pollen in lake sediments, is roughly representative of records obtained elsewhere at middle-to-high latitudes. Dating of such records is generally done by carbon-14 analysis.

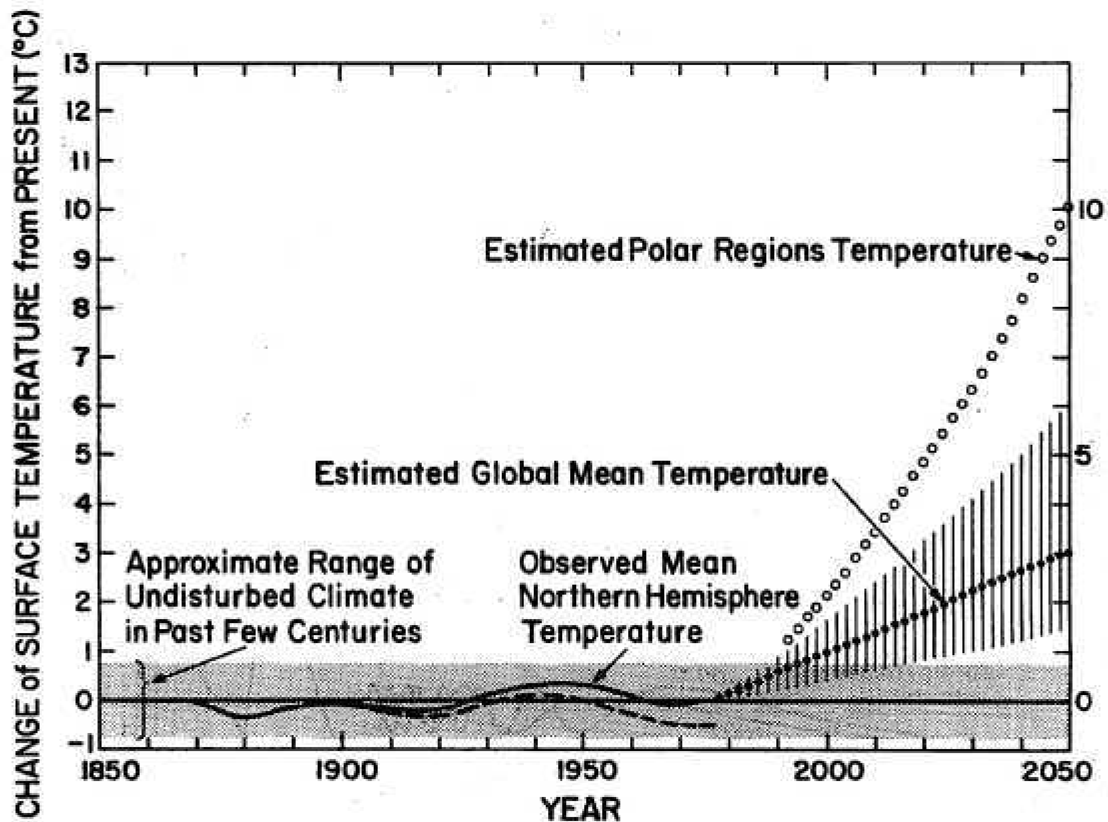

Figure 7. The mean surface temperature record for the northern hemisphere since 1860 (solid line), and what it might have been without the addition of carbon dioxide (dashed line). The shaded area includes almost the entire range of temperature fluctuations experienced during the past 1000 years or more. Future global mean temperature change (dotted line) is as shown in Table 3, the cross-hatching representing an uncertainty of a factor of two in the model calculations. Polar region temperature change is expected to be 3 to 5 times larger than the global mean. [Adapted from Mitchell (1977).]

summertime temperature or length of growing season (probably closely related). It does not tell much about wintertime conditions, however. The abrupt and short-term cooling at 4800 years ago (marked with a question mark in Figure 6, since it is not clear just how cold it got) killed off the spruce forests of northern Canada and forced the line separating forest from Arctic tundra southward almost to its present position. The tree line slowly moved back northward in the succeeding century or two, but then there was another less abrupt cooling around 3500 years ago, accompanied by an increase in forest fires in summer, that forced the tree line far south again.

This is just one example of this kind of climatic behavior, and there have been several others that were even more dramatic. For example, Flohn (GARP-16, App. 1.2, 1975) discusses one at 89,000 years ago that seems to have been worldwide and was probably considerably more intense. There is at present no general agreement on the causes of such short-term coolings, and in any case their timing is apparently random, so it would be folly to venture a guess as to when the next one might occur. All we can say is that it is highly improbable that one will occur in the next century or so, which is the period of our scenario, since these major events are generally spaced 10,000 to 20,000 years apart.

In summary, if we add the best estimates of each of the anthropogenic effects, with some judgment about the ones that are less likely to transpire, we conclude that the net influence of mankind is as shown in Table 3 and illustrated in Figure 7. We note from Table 2 that when we compare the rate of change of global mean surface temperature due to anthropogenic factors with the expected ± 0.1 to 0.2°C per decade natural changes they are significantly larger. The effect of adding carbon dioxide is the largest, and even the lower limit of that estimate is enough to cause a "signal" above the natural "noise" by the end of this century.

Table 3

Best Estimate of the Influence of
Mankind on Mean Surface Temperature

	Present	2000 AD	2050 AD
Absolute Change (°C)	0.5	+1.2	+4
Rate of Change	0.15	+0.5	+0.7

Assumptions:
a. Manufacture of chlorofluorocarbons will remain at 1973 level.
b. Direct addition of heat will not be important globally until after 2050 AD.
c. Effects of aerosols and patterns of land use are not included.

Again the point must be emphasized that these all refer to the global mean surface temperature changes, and the corresponding changes at middle and high latitudes will be much larger, as shown in Figure 7. This distinction has important implications, as we will show in the next section.

3. IMPLICATIONS OF A WARMER EARTH

3.1 Length of growing season

One can quite simply make an empirical deduction about the relationship between summertime mean surface temperature and length of growing season by plotting them both as a function of latitude. It turns out that at middle and moderately high latitudes they roughly parallel each other, and a good approximation is that a 1°C change in mean surface temperature in summer at a given latitude corresponds to 10 days change in growing season. The correspondence between length of growing season and yearly average temperatures is not quite as close, since wintertime temperatures are so strongly affected by continentality and regional differences, but the above rule of thumb still applies moderately well.

This being the case, an increase in global mean surface temperature of 1°C, for example, may result in about +2°C at 60° latitude and +3°C at 70° latitude, and this would give respectively about 20 or 30 days longer average growing seasons at these two latitudes. At 50° latitude the corresponding increase might be 15 days. This is the magnitude of the change that we estimate will occur a little before 2000 AD (see Table 3). (We have based this latitudinal dependence of temperature change on the model results of Manabe and Wetherald (1975) and Sellers (1974).)

3.2 Lessons from history

3.2.1 The temperature record

We have already mentioned the fact that there have been periods in the history of the earth when it was warmer than the present. In fact, when we study the paleoclimatic record on the time scale familiar to geologists we find that since the beginning of the Cambrian Period (about 500 million years ago) there have been just two relatively "short" periods when the earth had permanent ice at the poles, and the remaining 85 to 90 percent of that time the earth had virtually ice-free poles. On that time scale, then, we are now in an anomalously cold period (SMIC, 1971; Lamb, 1972).

A great deal of speculation has taken place about the reason for our present long-term ice age, and the most likely contenders are long-term solar fluctuations and continental drift--the latter being probably the preferred one currently. However, these extremely slow processes of climate change, whatever they are, seem largely irrelevant to our discussion of what may happen in the next century.

It is certainly pertinent, on the other hand, to enquire about the last few hundred thousand years, because that record is now becoming much clearer, and because there are some lessons here that may give helpful clues about the future.

Many readers of this report will recall the rather disturbing question that was raised in 1971 by a distinguished group of paleoclimatologists contemplating the climatic record for the Quaternary (the past one to two million years), a question that found its way into the public press and excited an investigation by the United States' White House (Kukla, et al., 1972). Their thought was, in brief, that in the past there have been fairly regular transitions about every 100,000 years between warm interglacials and glacial periods, that the interglacials have been relatively short and usually less than 10,000 years, that the end of the last warm interglacial (the Sangamon or Eemian, for which the record is clearest) occurred rather suddenly, and, finally, that we have enjoyed our present interglacial (the Holocene) for at least 10,000 years. So it was entirely reasonable to raise the question: Are we about to start our descent into another colder glacial period?

A subsequent sober review of this matter (Mitchell, 1972; NAS, 1975) has dispelled the fear that we are due for a "snowblitz," although this spectre has been kept alive by some popular writers (e.g., Calder, 1974). The probability of a large natural change in the next few centuries is very slight indeed, as can be seen by extending the sinusoidal curves of Figure 6 into the future--a point which was made earlier in Section 2.3.

3.2.2 The precipitation record

Most of the discussion so far has concerned the surface temperature and the effects that mankind might have on it, but it is equally important to know what might happen to the distribution of precipitation. In fact, it is the latter that largely determines whether vegetation will thrive and whether a region can grow food.

Even more so than temperature, precipitation is a function of the large-scale circulation patterns that can bring water vapor to a region, together with the regional factors that determine whether it will rain or snow. There must be a relationship between these all-important circulation patterns and the large-scale heat balance (or mean equator-to-pole temperature gradient), of course, since they are both measures of the activity of the atmospheric heat engine. The first is, in general terms, a measure of the kinetic energy of the system, and the other is a measure of the thermal energy available to run it. We would like to know more about this relationship.

It is natural to turn to our general circulation models (GCMs) and there have been a number of experiments with GCMs (some of them already referred to) in which changes in the heating applied to the system by the sun have been introduced, and the resulting change in the circulation pattern noted (e.g., Wetherald and Manabe, 1975). In a similar category, a number of other experiments have been done in which the surface boundary conditions of the last ice age, roughly 18,000 years ago, have been introduced into the computation (e.g., Williams et al., 1974; CLIMAP, 1976). Unfortunately, we can no longer go back to that period and verify how well the model has reproduced the ice age climate.

Such experiments have been most instructive, but we must recognize that there are limits to the ability of a GCM to simulate reality, particularly where the subtle variations of seasonal precipitation patterns are concerned (Manabe and Holloway, 1975; Gates, 1975). In a very real sense, it is these precipitation patterns that determine where the deserts, marginal lands, and "food baskets" will be, and that is what should concern us in a world where the climate may be changing.

In spite of their limitations, our GCM experiments have shown dramatically that when there is a change in the heat input to the system the model atmosphere responds in a most complex way. For example, with an increase in the total heat supplied to the system there is an overall warming of mean surface temerature, but some regions will warm very much more than others, and there may even be a cooling in some places (Washington, 1972). The real atmosphere behaves the same way (van Loon and Williams, 1976a; 1976b). The same complex response undoubtedly refers to the patterns of precipitation, and we would expect that there will be places where the precipitation will increase and others where it will decrease in the course of any marked climate change.

Another way to find out what a warmer earth might be like is to study a time when the earth itself was warmer than it is now. Such a time actually existed roughly 4000 to 8000 years ago, during the period known as the "altithermal" (also known as the Hypsithermal, Atlantic, or Climatic Optimum--optimum for whom?), and paleoclimatologists are beginning to piece together the strikingly complex picture of the conditions that existed then, at the dawn of civilization. This warming is clearly shown in Figure 6.

Evidence for the conditions at that time is derived from the distribution of fossil organisms in ocean sediments and of pollens in lake sediments, the history of the amounts of water in lakes, the extent of mountain glaciers, the distribution of trees and other

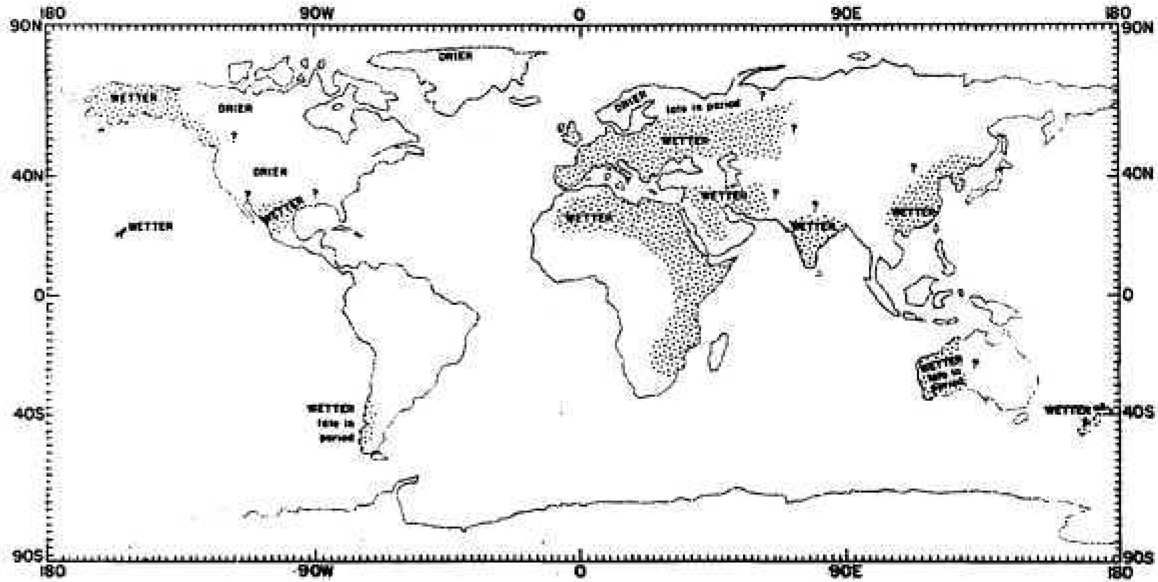

Figure 8. A somewhat schematic map of the distribution of rainfall, predominantly during the summer, during the Altithermal Period of 4,000 to 8,000 years ago when the world was generally several degrees warmer than now. The terms "wetter" and "drier" are relative to the present. Blank areas are not necessarily regions of no rainfall change--our information is still far from complete, and work is under way to fill in some of those areas.

vegetation in swamps, widths of tree rings, the location of ancient sand dunes, changes in the isotopic ratios of certain elements in ice and sedimentary cores, and so forth (Lamb, 1972; 1974; Flohn, GARP-16, App. 1.2, 1975; Kutzbach, GARP-16, App. 1.3, 1975). Out of many such investigations the picture of the conditions during the Altithermal period can be pieced together, as shown in Figure 8 referring to the precipitation relative to the present (Kellogg, 1977a; 1977b). It will be noted, for example, that North Africa was generally more favorable for agriculture than it is now, that Europe was wetter, Scandinavia dryer, and a belt of grass lands (sometimes called "the Prairie Peninsula") extended across North America, the eastern part of which subsequently became forested land.

We must caution the reader not to accept this as a literal representation of what might occur if the earth becomes warm again, since the causes and the characteristics of the warming 4000 to 8000 years ago could have been quite different from the characteristics of society's future effects. While we do not really know what caused that high level of mean temperature to be maintained during the Altithermal, one likely cause is the total output from the sun, and another possibility is the seasonal distribution of sunlight between the northern hemisphere and the southern hemisphere as the earth's elliptical orbit around the sun changed (the Milankovitch hypothesis). It is even possible that there was more carbon dioxide then, though we have no good evidence for this. In any case, each of these mechanisms to account for the higher mean temperature would presumably result in a different distribution of that heat energy, and therefore the patterns of the general circulation and precipitation would also depend on the mechanism involved.

Another reason for caution in using the Altithermal Period as a model for the future is the short time scale involved in our scenario. While the Altithermal seems to have evolved over a period of a few thousand years the anticipated warming may occur over a few decades. There are many components of the climate system, as we have mentioned, that have built-in delays, one being the ocean circulations and temperatures, another being the response of our land areas. We have discussed the tendency for a desert to reinforce itself because of its high albedo (see Section 2.2.7), a kind of positive feedback; and this could mean that the subtropical deserts will (for a time at least) resist a tendency toward more rainfall. These are clearly points that require more study.

In spite of all these reservations, it seems reasonable to study the way the world was when it was warmer than it is now, and to note that this at least represents a likely pattern for the future warmer earth. Using the real earth as our model is at least as good as, and probably better than, the theoretical numerical models that we currently run on our computers.

The fact that the subtropical deserts were wetter during the Altithermal, as shown in Figure 8, has a reasonable explanation in terms of two factors which must have been in operation. First, a warmer atmosphere will cause more water to be evaporated from the oceans, and the hydrologic cycle will consequently be more intense and there will be more precipitation generally, a point that has been verified by GCM experiments (Manabe and Holloway, 1975). Secondly, there will be a weakened equator-to-pole temperature gradient, so the general atmospheric circulation, and the tropical Hadley circulation in particular, will be less vigorous. Since a major cause of the present subtropical deserts is the suppression of convection in those regions by the descending arm of the Hadley cell, a decrease in this circulation should allow more convective precipitation in this part of the subtropics. While such a relationship is very likely real, it must be only part of the total explanation.

3.3 The fate of the ice masses

We have pointed out above that the most probable change in the mean surface temperature is a warming, and that the greatest changes will be in the polar regions, above 50° or 60° latitude (see Figure 7). This would certainly have an effect on the extent of polar ice and snow.

There are five distinct regimes of ice and snow: underground permafrost; the winter snow cover on the land that melts in the summer; floating sea ice, or "pack ice," some of which now survives through the summer in both polar regions; mountain glaciers, that can occur at any latitude; and the great ice sheets of Greenland and the Antarctic, that have remained more or less intact for many millions of years. Each of these regimes of ice and snow should be considered separately when we estimate their response to a change in the mean temperature at high latitudes, and the two that are probably most important to consider in our scenario are the floating sea ice and the great ice sheets. For an excellent review of this subject, see Untersteiner's Appendix 7 in GARP-16 (1975).

3.3.1 Arctic Ocean ice pack

The floating sea ice in the Antarctic appears and nearly disappears each year, while in the Arctic Ocean there is always a substantial area of multi-year sea ice the year round. The contrast between the seasonal behavior of the two polar regions can be illustrated by the fact that the area of pack ice frozen each winter around the Antarctic Continent (and melted each summer) is larger than the area of the entire Arctic Ocean.

Referring to the Arctic Ocean specifically, the major question is how much of a warming would be required to remove the pack ice completely, and whether such a complete removal will mean that it will remain open and not freeze over again in winter. There are a number of reasons for arguing that it probably would tend to remain open once the ice pack had been melted, barring a major change in sea level (Ewing and Donn, 1956; Donn and Ewing, 1966; SMIC, 1971; Budyko, 1974; Fletcher, 1965; Kellogg, 1975a; 1975b).

For one thing, the Arctic Ocean would present a dark surface in summer compared to the highly reflecting ice pack that exists now, so, even with some low clouds covering the area, a great deal more solar energy would be absorbed by the system in summer. (However, relatively more energy would be lost in winter.) Another rather compelling reason for thinking that the Arctic Ocean would be harder to freeze over once the ice pack had been removed is based on the fact that there is currently a layer of relatively low-salinity water floating under the ice pack (to a depth of 10 to 30 m), and, since this relatively fresh water has a lower density than the normal salt water of the ocean, it produces a stable layer that inhibits mixing and exchange of heat between the surface layers and the warmer waters below (Aagaard and Coachman, 1975). With the ice pack removed wave action and surface currents would be expected to eliminate this thin stable upper layer. For both of these reasons, it seems likely that if and when the Arctic Ocean ice pack is removed as a result of a global warming the open freely mixing ocean will not freeze over again. On the other hand, Untersteiner (GARP-16, App. 7, 1975) injects a note of caution lest we jump too quickly to this conclusion.

So far there is no adequate combined atmosphere-ocean-sea ice model that can be used to estimate the response of Arctic sea ice to a global warming, though there have been some notable advances in this area (Maykut and Untersteiner, 1971; Budyko, 1974; Rothrock, 1975; Untersteiner, GARP-16, App. 7, 1975; Washington _et al._, 1976). It must require a considerable warming to remove the ice, however, since evidence from Arctic Ocean sediments suggests that it has never been ice-free for the past million years or more. Furthermore, Budyko (1974) estimates, based on a relatively simple pack ice model, that at least a 4°C warming in summer would be required to eliminate it.

An open Arctic Ocean would, of course, allow a great deal more evaporation than the frozen Arctic Ocean, and this would presumably result in more rain in summer and snow in winter around its shores. What this would do to the mean snow cover on land, or to the size of the Greenland ice sheet, is still a matter of speculation, but it would certainly represent a major difference in the patterns of temperature and rainfall that exist now. Experiments with the two-layer Mintz-Arakawa GCM have been performed at the Rand Corporation (Santa Monica, California) to determine the effect on temperature and precipitation of an open Arctic Ocean (Fletcher _et al._, 1973), and the result was a warmer temperature

at the edge of the ocean by 10°C, and an even larger increase in the central Arctic. These results are for a wintertime situation. The change in precipitation in that model simulation experiment does not seem to have been very significant, however, which is surprising.

3.3.2 Ice sheets of the Antarctic and Greenland

Turning to the ice sheets of Greenland and the Antarctic, their total volume is determined over a long time period by a balance between the snowfall on the tops and the melting, ablation, or breakoff at their edges. Also, the effect of intermittent "surges" of an ice sheet must be considered (Hughes, 1970; 1973; Flohn, 1975), since these are dynamic systems. It is not evident that a warming will necessarily result in the decrease in the size of these ice sheets, since a warmer atmosphere can also hold more moisture, and this in turn can result in more snow fall on their tops and a larger volume (a hypothesis proposed by Scott as early as 1905). There is apparently some inconclusive evidence that the East Antarctic ice sheet (which is by far the largest) shrank during the period of the last glaciation in the northern hemisphere and then slightly enlarged during the warming period (Denton *et al.*, 1971; Flohn, 1963; Lamb, 1972, p. 485), out of phase with the continental ice sheets of North America and Europe. (This was apparently not the case for the Greenland ice sheet, however.)

Each of these ice sheets should be considered separately in such a discussion, since their characteristics are very different. Greenland, with a total volume that corresponds to about 7 m of ocean water, is influenced by the Arctic Ocean and the other sources of moisture in the northern hemisphere. It receives considerably more snow than the Antarctic ice sheets, and its southern end extends well below the Arctic Circle. The East Antarctic ice sheet is by far the most massive in the world, with a volume 8 to 10 times greater than that of the Greenland ice sheet (thus representing as much as 70 m of ocean), and its highest point is not far from the South Pole. The West Antarctic ice sheet, with a slightly smaller volume than that of the Greenland ice sheet, has less snowfall to replenish it, and unlike the other ice sheets its edges are partly grounded below sea level. There are already some signs of a current retreat of this ice sheet (Denton *et al.*, 1971), and, if there is a major warming and it retreats so that the Antarctic Ocean water can flow under it, it would presumably begin to melt faster (Hughes, 1973; Mercer, 1968). On a geological time scale it is this ice sheet that we should watch with some concern. However, obviously one should not expect much action in the time scale of human affairs--that is, for the next few centuries at least--since the time required for a turnover of water substance in the major ice sheets is on the order of 10^4 to 10^5 years (Untersteiner, GARP-16, App. 7, 1975).

It must be clear, however, that, considering the immense volumes of these three ice sheets, even a relatively small fractional change of their volumes would affect mean sea level. Since the turn of the century sea level has risen about 20 cm (SMIC, 1971), but this rate of rise has slowed since 1940 (Hicks and Crosby, 1975). Can this have been due to some melting of the ice sheets? Or can it have been caused by mankind's pumping of "fossil water" from underground aquifers?

In the glaciological literature there is a type of event that has attracted much attention, known as a glacier "surge." It is well known that mountain glaciers under certain circumstances can move very rapidly for a period of a few months or years, and then more slowly again. An explanation is that melting at the bottom of a glacier allows it to slide with less friction over the underlying rock, and the greater motion (once a surge starts) helps to generate heat at the interface, and that in turn maintains the motion until a new equilibrium distribution of mass is attained. The same could, in principle, happen to the ice sheets of the Antarctic (Wilson, 1969; Hughes, 1970) with very pronounced effects on the climate of the world as these great blocks of ice were carried to other latitudes by the ocean currents (Flohn, 1975; GARP-16, App. 1.2, 1975).

When conditions are warmer there is more likely to be water on the underside of an ordinary glacier, so an ice sheet might also be expected to respond to a warming by moving faster. Actually, in the case of the ice sheets, changes in the air temperature on the time scale in which we have been dealing would probably not be felt at the bottom, since conductivity in these ice sheets is poor and they are extremely massive. Therefore, it is highly unlikely, regardless of whether such Antarctic ice surges could occur or have occurred in the distant past, that they would be a part of our scenario of warming in the next century or so--but neither can we completely exclude it as a kind of highly unlikely event that might take place anyway.

4. VALUE OF A LONG-RANGE CLIMATE FORECAST

4.1 Who can use a climate forecast?

The scenario developed in this report (see Tables 2 and 3, and Figures 3 and 7) covers a time period that is comparable to the life of a human individual, and perhaps roughly comparable to the average turnover time of the buildings and factories of a large city, but very short compared to geological processes. Yet in planning for the future the time scale usually considered by a government policy maker has tended to be his or her expected term of office--though this appears to be changing.

Thus, even if scientists could agree that the future course of the climate would indeed more or less follow our scenario, there remains the question of how useful this information would be. Who would take advantage of it in their planning? What kinds of human activities would benefit from the knowledge that in the next few decades the temperature and precipitation patterns would be different?

The fact is that never in the history of mankind's affairs have planners and decision makers been given such a forewarning--with the possible exception of the Biblical story of Joseph's advice to the Pharaoh about the seven years of plenty and the seven years of famine. We have no experience with how to act, given several decades of lead time. Perhaps harbor designs and construction practices would be different if we knew sea level would rise, perhaps real estate values in marginal regions would be affected if we knew the growing conditions would improve, perhaps new orchards would be planted with the sure prospect of a warmer earth, and so forth. However, so far these situations are hypothetical, until scientists can give more assurance than they seem to feel they can give at present (Kellogg and Schneider, 1974; Schneider, 1976).

It may never be possible to speak with complete assurance about the future of the climate, because (as we have emphasized before) there will inevitably be natural climate fluctuations [perhaps caused by volcanic activity or changes in the sun (Roberts and Olson, 1973; Wilcox, 1975)], longer-term climate changes, and sudden anomalous cooling events of the sort that have occurred in the past. Until we know a great deal more than we do now about the climate system and the external influences on it we will not be able to predict these natural interventions.

The fact remains, however, that our best estimate of the future magnitude of mankind's effects, based on a prediction of the second kind, is that these effects will be considerably larger than the expected natural changes. Therefore, it seems that the warming will be likely to dominate throughout the next century or more, and the probability of a natural cooling taking over is low. This should be a useful piece of information if we can agree on it.

There is another aspect to this prospect that makes it even more unique: If we wanted to badly enough we could take action to avoid it. It may turn out that the extreme warming that could conceivably occur toward the latter part of the next century will be deemed "unacceptable" by the nations of the world, and that strong international action

will then be taken to drastically cut down the burning of fossil fuels or to institute countermeasures against the warming. These are certainly options that must be kept in mind.

4.2 The longer time scale

The magnitude of such natural interventions is expected to be larger when we consider a period longer than that of our scenario. Figure 6 shows that the amplitudes of the 100,000, 20,000 and 2,500 year oscillations are larger than the 100 and 200 year oscillations; and another way of expressing the same general concept (used by those who dislike harmonic analyses) is to speak of climate as an almost stochastic process producing random fluctuations with extra spectral power in the longer periods, or a "reddened spectrum" (Kutzbach and Bryson, 1974; NAS, 1975). If some of the periodic oscillations prove to be real (as they probably are) there is a chance that we can make some long range predictions of the natural climate changes, but to the extent that it is a random or stochastic process predictions can only be in probabilistic terms (Mitchell, 1976).

As we look at the longer range, then, beyond 2050 AD and the end of this scenario, we may be faced with larger natural changes, but it is also possible that mankind's influence will continue to grow larger. In the short term the largest single effect is due to our addition of carbon dioxide (see Table 2), and the continuation of this activity could result in a further increase beyond 2050 AD if coal continued to be burned. Furthermore, recall that the estimated relaxation time for this added carbon dioxide, the time required for the deep ocean to take up about two-thirds of it, is estimated to be 1500 years. Thus, the carbon dioxide released in the next century or two will remain with us in the atmosphere for the next millenium.

It may be somewhat fruitless to consider the centuries ahead, partly because of our inability to predict what nature may have in store, but largely because we do not know what mankind will do. It is possible to imagine a technologically successful and vigorous "post-industrial society" with ample food and energy resources, a stable population, and a continuingly increasing warming effect on the planet; and it is also possible to imagine a society that is exhausting the earth's natural resources and being forced into a declining population and a declining standard of living. There are prophets of each of these alternative fates for civilization (see Section 1.3). The future choice will probably not lie with technology itself, but in the skill with which technology is used and the social structures that are adopted (Kellogg and Schneider, 1974; Schneider, 1976; Kahn *et al.*, 1976).

We mention these matters to indicate the nature of the problems that one must face as one looks at the more distant future. Will climate change pose an ultimate limit to human growth? This seems unlikely, but we cannot be sure of the answer. The only thing that is abundantly clear is that scientists, technologists, and the leaders of society must work together to make the right choices in the face of uncertainty. The dialogue between them has already begun.

5. NARROWING AREAS OF UNCERTAINTY

Scientific endeavor is often seen as an almost random process of poking into shadowy corners to retrieve new morsels of knowledge. While these morsels often prove to be valuable, there are situations where science faces a set of relatively well formulated problems, and then the process of selecting which dark corners to penetrate need no longer be random. When the answers to these problems will have an influence on the future course of mankind, then scientists have little choice but to try to bend their efforts together.

The future effects of mankind on the climate seems to be a case in point. There are a number of problems that need to be solved before we can make a "prediction of the second kind" with the degree of certainty that is required by society. The question is one of narrowing those areas of uncertainty that are not only challenging scientifically but have the most important implications for our future--and the future of our children.

We will single out those problems that seem to be clear enough to attack now and which seem to be most demanding of an answer, fully realizing that research is hardly ever a thing that can be planned in detail ahead of time. Furthermore, the areas will be limited to those involving the effects of mankind, and we will not deal with the larger question of research on the physical basis of natural climate change. These are dealt with elsewhere (GARP-16, 1975; NAS, 1975).

5.1 Climate modeling

Predictions of the second kind depend on determining the response matrix of a climate model that includes as many of the important feedback loops of the climate system as possible, either explicitly or implicitly by parameterization. We may be able to satisfy ourselves that for certain purposes a set of feedback loops can be neglected in the model, but this requires careful study.

Great labor and ingenuity has gone into the development of a variety of climate models already (Schneider and Dickinson, 1974; GARP-16, 1975), but it is generally recognized that for climate experiments there are at least three parts of the system that must be included in our models better than they have been so far, so that their responses can be taken into account. These are:

- response of cloudiness
- response of ocean circulations
- response of polar sea ice (to be discussed further).

In addition to improving our understanding of the components of the climate system, illustrated in Figure 1, a major effort must continue to be directed toward schemes for coupling them together. As our numerical techniques and the power of computers improve we should be able to build more complete coupled models with which to do more refined experiments on the climate system.

5.2 Carbon dioxide sources and sinks

Since the increase in carbon dioxide content of the atmosphere appears to be the largest single anthropogenic influence on climate now and to be expected in the next century, we must be sure we understand its natural sources and sinks. Its main reservoirs (outside of fossil fuel still in the earth) are the oceans and the biomass of the earth, mainly organic material in soils and the forests. The specific questions relating to carbon dioxide that have been only partially answered so far are these--and there are several ways of asking them:

- how have the upper layers of the ocean taken up the added carbon dioxide from the atmosphere already? and what is the temperature dependence of the process?
- where and how rapidly do these upper layers mix with the deep ocean water? and how will this exchange be influenced by a global warming?
- what is the magnitude of the biomass sink? and how will it be affected by deforestation, especially in the tropics? and how will various ecosystems respond to a changed climate and an increased atmospheric carbon dioxide content?

5.3 Arctic ice pack

Of all the subsystems of the climate system, the one that is likely to play the most significant part in a warming of the earth is the Arctic Ocean ice pack, for reasons given in Section 3.3.1. The WMO Executive Committee has already noted this as a special area of study (in Resolution 12 (EC XXVIII)). If the ice pack is sensitive to warming, and if it were possible to remove it all, this would come as close to an "irreversible" process as anything else we can think of. The heat balance of the ice pack has been studied extensively (Fletcher, 1965; Untersteiner, GARP-16, App. 7, 1975), but it is still difficult to model (Maykut and Untersteiner, 1971; Washington *et al.*, 1976). The variable effect of open leads on heat transfer between surface and atmosphere, the lack of a good description of the mechanical or constitutive properties of sea ice, and the difficulty of assessing heat transfer in the upper ocean layers seem to be the main difficulties now, and there are others. The development of a better model of this ice pack would therefore seem to demand a very high priority.

5.4 Ice sheets

The possibility that a major global warming will cause a small fractional change in the volume of the ice sheets of the Antarctic and Greenland is very real, though we are not even sure of the sign of the change (see Section 3.3.2). Since together they account for enough water substance to increase sea level by 80 m, even a small and barely perceptible change in volume would slowly impact all the coastal cities and plains of the world. This could be among the most devastating and costly of all the environmental effects that we have discussed. In view of this, there are at least two major areas of investigation that should be pursued (in addition to continuing to monitor sea level):

- o improve the models of the ice sheets, including not only the internal dynamics of the ice mass but the relevant meteorological factors of temperature, precipitation, and atmospheric circulation as they will be affected by a global warming and changes in other parts of the system, e.g., in the case of Greenland a more open Arctic Ocean;

- o carefully monitor the topography of the ice sheets; and radar altimeters on satellites may now provide a new tool for obtaining unprecedented accuracy (less than 1 m) over relatively level parts of the ice sheets.

5.5 Changing patterns of temperature and precipitation

A global warming will be most noticed by those living in places that are affected by the largest changes in temperature and precipitation, and these parameters will certainly vary from region to region. It is therefore not enough to predict the overall response of the climate system, for we must try to foresee the *regional* changes. There are two approaches to this, as has been discussed (see Section 3.2.2):

- o experiment with changing the boundary conditions of improved general circulation models that include realistic topography and hydrologic processes;

- o clarify the picture of the Altithermal period, when conditions were warmer, on a region-by-region basis.

5.6 Aerosols

We have not been able to assign any numbers to the effects of anthropogenic aerosols on global or regional climate because of a lack of knowledge about the optical properties and geographical distributions of such aerosols. Furthermore, the character of anthropogenic aerosols must be changing as efforts are made to suppress the emission of the larger soot particles from power plants and mills, control the use of backyard incinerators, limit slash-and-burn agricultural practices, and so forth--all this combined with the continued increase of sulphate particles produced secondarily from burning coal and fuel oil (see Section 2.2.5). We must therefore study present aerosol types and also try to predict the course of future emissions.

Among the recommendations of an ad hoc Working Group on Aerosols and Climate that met in Garmisch Partenkirchen in August 1976, chaired by R. Charlson, were the following (with some additions):

- agree on the methodology for describing aerosol characteristics, including their optical properties, in terms of a few fundamental aerosol types;
- make measurements at selected locations and times to develop a simple aerosol climatology, showing the distribution seasonally, geographically, and with altitude of the fundamental aerosol types;
- model the direct radiative effects of these aerosol types on the regional heat balance under both cloud-free and cloudy conditions, and determine the sensitivity of the overall results to variations of relevant measured or assumed parameters;
- survey air pollution control activities and plans in major or representative countries to obtain an estimate of the trends that can be expected in the future.

5.7 Other areas of study

While these appear to us to be the problems that demand the most immediate attention in our present context, there are, of course, many others. The possible changes in stratospheric ozone, for example, have implications for the climate as well as for solar ultraviolet (Ramanathan *et al.*, 1976); any increase in nitrous oxide and fluorocarbons in the troposphere increases surface temperature, and the nitrous oxide-fertilizer issue will not be settled until we know more about the oceans as a source; changes of the characteristics of the land will have an effect on heat and water balance, and this will influence regional climate; and so forth. Clearly, none of these factors can be said to be unimportant.

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Annex 13

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Assessing ExxonMobil's climate change communications (1977–2014)

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ADDENDUM

Addendum to 'Assessing ExxonMobil's climate change communications (1977–2014)' Supran and Oreskes (2017 *Environ. Res. Lett.* **12** 084019)

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Supplementary material for this article is available online

Abstract

In our 2017 study 'Assessing ExxonMobil's climate change communications (1977–2014)', we concluded that ExxonMobil has in the past misled the public about climate change. We demonstrated that ExxonMobil 'advertorials'—paid, editorial-style advertisements—in *The New York Times* spanning 1989–2004 overwhelmingly expressed doubt about climate change as real and human-caused, serious, and solvable, whereas peer-reviewed papers and internal reports authored by company employees by and large did not. Here, we present an expanded investigation of ExxonMobil's strategies of denial and delay. Firstly, analyzing additional documents of which we were unaware when our original study was published, we show that our original conclusion is reinforced and statistically significant: between 1989–2004, ExxonMobil advertorials overwhelmingly communicated doubt. We further demonstrate that (i) Mobil, like Exxon, was engaged in mainstream climate science research prior to their 1999 merger, even as Mobil ran advertorials challenging that science; (ii) Exxon, as well as Mobil, communicated direct and indirect doubt about climate change and (iii) doubt-mongering did not end after the merger. We now conclude with even greater confidence that ExxonMobil misled the public, delineating three distinct ways in which they have done so.

1. Introduction

In our recent article (Supran and Oreskes, 2017 *Environ. Res. Lett.* **12** 084019 [1]), we assessed whether ExxonMobil has in the past misled the general public about anthropogenic global warming (AGW) (we refer to Exxon Corporation as 'Exxon', Mobil Oil Corporation as 'Mobil', ExxonMobil Corporation as 'ExxonMobil Corp', and generically refer to all three as 'ExxonMobil'). Presenting an empirical document-by-document textual content analysis of the company's private and public climate change communications—including peer-reviewed and non-peer-reviewed publications, internal company documents, and paid, editorial-style advertisements ('advertorials') in *The New York Times* (*NYT*)—we concluded that it has.

After our study was published, we became aware of additional relevant ExxonMobil advertorials not included in our original analysis. Here, we present a document-by-document content analysis of 1448 advertisements, which include these additional materials. Our original finding is reinforced: between 1989–2004, Mobil and ExxonMobil Corp advertorials overwhelmingly expressed doubt about AGW as real and human-caused, serious, and solvable. By including additional advertorials in this expanded analysis, we now conclude with even greater confidence that Exxon, Mobil, and ExxonMobil Corp misled the public.

We also address a critique that ExxonMobil Corp has raised about our original study: that it 'obscur[ed] the separateness of the two corporations', Exxon and Mobil, thereby rendering our conclusions invalid [2, 3]. This was never the case: our article's citations explicitly attributed each individual advertorial to one of Exxon, Mobil, or ExxonMobil Corp; we did not obscure anything. It is the case that to avoid overcomplicating or belaboring the point, our original article focused on how the three companies—Exxon, Mobil,

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and ExxonMobil Corp—have collectively misled the public. We considered this approach appropriate, because when Exxon and Mobil merged, ExxonMobil Corp inherited legal and moral responsibility for the parent companies. We reject the implied argument that ExxonMobil Corp is somehow not responsible for the actions of Exxon or Mobil, whatever they may have been. Here, we show ExxonMobil Corp's critique to be incorrect both statistically and at the level of individual documents. We delineate three distinct ways in which the data demonstrate that Exxon, Mobil, and ExxonMobil Corp have all, variously, misled the public about AGW.

2. Method

Previously we demonstrated that between 1989–2004, available advertorials—paid, editorial-style advertisements on the Op-Ed page of the *NYT*—published by Mobil and ExxonMobil Corp overwhelmingly expressed doubt about AGW as real and human-caused, serious, and solvable [1]. In this study, we analyze additional advertorials that came to light after our study was published.

We adopt the same methodology as in our prior study, characterizing each document's manifest content in terms of its (i) topic, (ii) position with respect to AGW, and (iii) position with respect to risks of stranded fossil fuel assets [1]. Results from our original analysis of the 32 Internal memos, 72 Peer-Reviewed articles, and 47 Non-Peer-Reviewed articles made available by ExxonMobil Corp are carried forward (see table 1). As before, our analysis compares these documents with Mobil and ExxonMobil Corp's public outreach in the form of advertorials in the *NYT*.

We previously analyzed 36 AGW-relevant advertorials from a collection of 97 compiled by PolluterWatch based on a search of the ProQuest archive [1, 6, 7]. Here, we add to this dataset of 36 by running two additional Boolean ProQuest searches (see section S1, supplementary information for details). In the first, we query for all advertisements in the *NYT* between 1923 and 2018 that refer to 'Mobil' *or* 'Exxon' *or* 'ExxonMobil' *and* to one or more of 13 keywords pertaining to AGW (based on a word frequency analysis of all advertorials included in [1]): 'climate' *or* 'climate change' *or* 'greenhouse' *or* 'global' *or* 'warming' *or* 'Kyoto' *or* 'carbon' *or* 'CO2' *or* 'dioxide' *or* 'temperature' *or* 'GHG' *or* 'Fahrenheit' *or* 'Celsius'. This relevance sample search yielded 1412 documents [8]. In our second search, we query for all advertisements published in the *NYT* on Thursdays between 1970 and 2018, and that refer to 'climate change' *or* 'global warming' *or* 'greenhouse gas' *or* 'greenhouse gases' *or* 'greenhouse effect' *or* 'carbon dioxide' *or* 'CO2'. (This search specifically targets Mobil and ExxonMobil Corp's 'every Thursday' (1972–2001) and 'every other Thursday' (2001+) advertorials [9, 10].) This search yielded 138 documents. Combining the above three datasets and removing redundancies yielded a total of 1448 documents spanning 1924–2013 (see table S4, supplementary information). Despite our comprehensive search, additional unidentified advertorials may, of course, exist. We would welcome ExxonMobil Corp making publicly available a complete online database of its—and Mobil's—advertorials in all newspapers (archived versions of the company's website show that in the past, some—but not all—advertorials were listed, albeit misrepresented as 'Op-Eds' [11]).

Eight research assistants conducted an initial, high-level content analysis to filter for relevance the 1412 documents generated by the first ProQuest search. The assistants downloaded and inspected each individual document within assigned publication windows spanning one to ten years. Applying a standardized procedure, they binned each document as either 'irrelevant' or 'not irrelevant' (subcategories of 'relevant', 'generic', and 'ambiguous') to AGW, erring heavily on the side of caution (even most 'not irrelevant' documents do not, in fact, express any positions on AGW). The remainder of the 1448 documents were likewise binned by one of the authors. To verify intercoder reliability, each analyst independently coded a random subset of 100 documents (approximately 7% of the total number of documents; equivalent, on average, to 61% of the number of documents analyzed by each assistant). In sum, this yielded 267 'not irrelevant' advertorials (intercoder reliability: percentage agreement = 92%; Krippendorff's $\alpha = 0.77$; these are conservative lower-bounds owing to Type I errors, the true value is close to unity—for details see section S1, supplementary information). The authors then coded these 267 advertorials according to the content analysis scheme detailed in [1]. (This included occasional reevaluations of codes assigned in our original analysis.)

We have also obtained additional non-peer-reviewed documents not included in our original study, such as company reports, webpages, and speeches. These inform our interpretation of the results of our content analysis. The sources for these additional documents include the Climate Files archive maintained by Climate Investigations Center, ExxonMobil webpages, and digital archives (Wayback Machine) of earlier ExxonMobil webpages [12, 13]. Unlike other document categories, which are bound sets, non-peer-reviewed documents are virtually limitless in potential number and scope (see footnote on p. 2, [1]). Accordingly, while we introduce specific new non-peer-reviewed documents in this paper in order to inform our Discussion, we do not systematically assess their positions using content analysis. Table 1 and figures 1 and 2 reflect only those non-peer-reviewed documents included in our original study.

Table 1. Inventory of documents analyzed. Shown for each document category are the total number of documents, their date range, source(s), and assigned types. The internal, peer-reviewed, and non-peer-reviewed documents are those studied in [1]. Among peer-reviewed and non-peer reviewed documents, eight publications were found to be redundant, with similar or identical wording to seven other (strictly unique) publications. All 15 are included in our analysis. Among non-peer-reviewed documents, there are two citations provided by ExxonMobil Corp that are identical to two others. The identical two are not included in our analysis. Sources: 'Peer-Reviewed' and 'Additional' publications are cited in the 'Exxon Mobil Contributed Publications' list [4]; 'Supporting Materials' are internal documents offered by ExxonMobil Corp [5]; 'Other' sources refers to documents discovered independently during our research; *ICN* = *InsideClimate News; NYT* = *The New York Times. NYT* advertorials were collated from Polluter Watch and ProQuest [6, 7]: an initial relevance sample search yielded 1448 documents, from which 267 'not irrelevant' advertorials were identified for further content analysis. For details on document types, see section S2, supplementary information (available online at https://stacks.iop.org/ERL/15/119401/mmedia), [1]. Miscellaneous Opinions include, for example, commentaries, opinion editorials, and speeches.

			Sources						Document types							
			Provided by ExxonMobil Corp													
Category	No.	Dates	'Peer-reviewed'	'Additional'	'Supporting materials'	*ICN*	*NYT*	Other	Academic Journal	Conference/Workshop proceeding	Gov. report	Book	Industry White Paper	Internal doc.	Ad	Misc. opinion (e.g. comment, op-ed, speech)
Internal documents	32	1977–1995	0	0	22	28	0	1	0	0	0	0	0	32	0	0
Peer-reviewed	72	1982–2014	50	19	0	0	0	3	53	2	13	4	0	0	0	0
Non-peer-reviewed	47	1980–2014	3	29	0	3	0	12	0	24	5	2	2	0	0	13
Advertorials	1448	1924–2013	0	0	0	0	1448	0	0	0	0	0	0	0	1448	0

Figure 1. Timeline of the overall positions of 212 and 180 documents on AGW as (a) real and human-caused and (b) serious, respectively (overall positions are color-coded in the legend and defined in [1]). Each line represents an individual document. Documents are sorted by category and publication date. For legibility, only those Advertorials expressing positions are shown (out of a total of 1448 documents).

3. Results

3.1. Endorsement Levels (ELs)—AGW as real and human-caused

Figure 1(a) is a timeline of the overall positions of 212 documents on AGW as real and human-caused, sorted by publication date and into four categories: *Internal Documents, Peer-Reviewed, Non-Peer-Reviewed*, and *Advertorials*. Each line represents an individual document and is color-coded (see [1] for definitions): No position (grey); Acknowledge (blue); Acknowledge and Doubt (black); and Doubt (red). Dashed lines indicate documents that have been filtered for reasonable doubt. ELs for Internal, Peer-Reviewed, and Non-Peer-Reviewed documents are reproduced from our original analysis. ELs are shown for 61 advertorials, spanning 1972–2009, found to express a position (for legibility, the remainder of the 1448 documents with no position are not shown). For each category and for all documents that express a position, figure 2(a) shows the fractions of documents that take that position. For each category (except

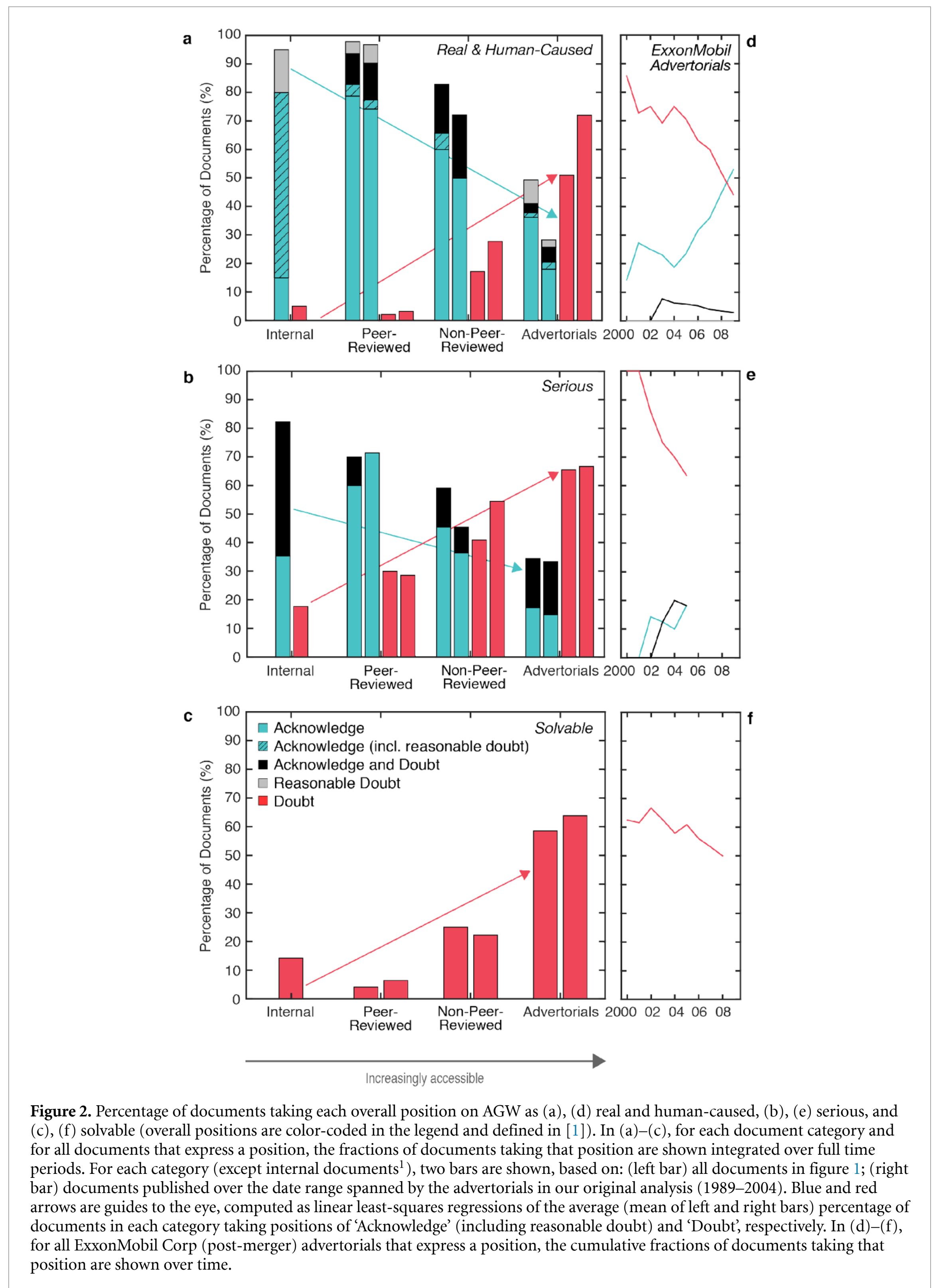

Figure 2. Percentage of documents taking each overall position on AGW as (a), (d) real and human-caused, (b), (e) serious, and (c), (f) solvable (overall positions are color-coded in the legend and defined in [1]). In (a)–(c), for each document category and for all documents that express a position, the fractions of documents taking that position are shown integrated over full time periods. For each category (except internal documents[1]), two bars are shown, based on: (left bar) all documents in figure 1; (right bar) documents published over the date range spanned by the advertorials in our original analysis (1989–2004). Blue and red arrows are guides to the eye, computed as linear least-squares regressions of the average (mean of left and right bars) percentage of documents in each category taking positions of 'Acknowledge' (including reasonable doubt) and 'Doubt', respectively. In (d)–(f), for all ExxonMobil Corp (post-merger) advertorials that express a position, the cumulative fractions of documents taking that position are shown over time.

internal documents[1]), two bars are shown: the left bar of each pair is based on all documents in figure 1; the right bar is based on documents published over the date range spanned by the advertorials in our original analysis (1989–2004), allowing direct comparison to [1]. In both cases (1972–2014 and 1989–2004), positions on AGW as real and human-caused vary significantly across document categories (Fisher's exact test, FET: $p = 8.8 \times 10^{-10}$ and $p = 7.0 \times 10^{-9}$, respectively; see section S2, supplementary information, for details and all probability values).

[1]As in [1], only one bar is shown for internal documents, based on all internal documents (1977–2002), because only 4 of the 20 internal documents expressing a position fall between 1989–2004.

3.1.1. Peer-reviewed, non-peer-reviewed, and internal documents

For detailed descriptions of the positions of Exxon and ExxonMobil Corp's peer-reviewed, non-peer-reviewed, and internal documents, see [1]. Figures 1(a) and 2(a) show that Exxon and ExxonMobil Corp's peer-reviewed publications overwhelmingly acknowledge AGW as real and human-caused ('Acknowledge'). Over the timespan of all documents (left bars in figure 2(a)[1]; see right bars for 1989–2004), of the 65% (47/72) of peer-reviewed documents that express a position, more than four-fifths hold an 'Acknowledge' position (39/47 = 83%). The predominant stance in non-peer-reviewed communications is also 'Acknowledge', although compared to peer-reviewed work, it loses ground to the 'Acknowledge and Doubt' and 'Doubt' stances in roughly equal measure ($p = 0.044$, FET). Of the 74% (35/47) that take a position, 66% (23/35) 'Acknowledge', 17% (6/35) 'Acknowledge and Doubt', and 17% (6/35) 'Doubt' that AGW is real and human-caused. Finally, the bulk of Exxon's internal documents also take the 'Acknowledge' stance. Of the 63% (20/32) that take a position, 80% (16/20) adopt 'Acknowledge', with most of the rest expressing 'Reasonable Doubt' (3/20 = 15%).

3.1.2. Advertorials

In contrast, the predominant stance in Mobil and ExxonMobil Corp advertorials between 1989 and 2004 is 'Doubt', consistent with our original results (e.g. peer-reviewed publications versus advertorials: $p = 2.9 \times 10^{-9}$, FET). Figures 1(a) and 2(a) (right bars) show that of the 8.5% (39/457) of advertorial search results over this period that take a position (including 13 new advertorials uncovered by our ProQuest searches), 72% (28/39) take the position of 'Doubt', with the remainder mostly split between 'Acknowledge' (8/39 = 21%) and 'Acknowledge and Doubt' (2/39 = 5%). Table 2 (top row) provides sample quotations (see section S4, supplementary information, for substantiating quotations for all advertorials). A characteristic example not included in our original dataset is a 2000 ExxonMobil Corp (not Mobil or Exxon) advertorial in the *NYT* and *The Washington Post*, in which the company criticized a US National Assessment report on climate change as putting the 'political cart before a scientific horse' and being based 'on unreliable models' that were 'not yet capable of predicting Earth's global climate' [14, 15]. The advertorial was condemned by the former director of the National Assessment Coordination Office: 'To call ExxonMobil's position out of the mainstream is…a gross understatement' [16]. Another 2000 ExxonMobil Corp advertorial says that 'climate change may appear as confusing as a maze' [17].

Expanding beyond our original analysis to include 4 and 18 new advertorials published pre-1989 and post-2004, respectively, figures 1(a) and 2(a) (left bars) show that 'Doubt' continues to account for half of all positions (31/61 = 51%), though it loses some ground to the 'Acknowledge' stance (23/61 = 38%). The remaining positions are shared between 'Reasonable Doubt' and 'Acknowledge and Doubt' (5/61 = 8% and 2/61 = 3%, respectively). Examples of 'Doubt' include three ExxonMobil Corp advertorials in 2007, which, despite acknowledging 'the risks of climate change', variously say that 'climate science remains extraordinarily complex', that it is 'evolving', and that 'areas of uncertainty do exist' [18–20]. Of those advertorials expressing 'Acknowledge' from 2005 onwards, 93% (14/15) do so only implicitly (EP3a), almost exclusively by discussing mitigation (such as energy efficiency and technology innovation) rather than climate science. None explicitly say that climate change is real and human-caused.

Accompanying the emergence of implicit acknowledgments is a rhetorical framework focused on 'risk'. 'Risk(s)' of AGW (or of greenhouse gases) becomes ExxonMobil Corp's watchword, appearing at least once in 87% (13/15) of these advertorials (table S4, supplementary information). A characteristic example is a 2007 advertorial entitled 'Saving Energy and Reducing Greenhouse Gas Emissions', which refers to 'steps ExxonMobil is taking to address the risk of climate change' and says that 'industry, consumers and policymakers all have a role to play in addressing the risks of climate change' [21]. A 2008 advertorial discusses lower-carbon fuels and other approaches to 'addressing the risks posed by rising greenhouse gas emissions', but without mentioning AGW [22].

These observations—of implicit acknowledgments and 'risk' rhetoric—are part of a wider trend. Regarding the former: across all advertorials in all years, only two express any form of explicit acknowledgment (EP2). One, a borderline case in 2005, does so only indirectly, by quoting a statement from the Group of Eight (G8) that does not address causation [23]. The other, in 1989, is not in fact an advertorial, but an advertisement in *The New York Times Magazine* that may or may not have actually included Exxon among its industry sponsors [24]. All other acknowledgments are implicit: they avoid directly addressing climate science and the issue of human causation, instead discussing emissions reductions strategies. Figure S1, supplementary information, shows that from the late 1990s onwards, advertorials focused on mitigation rapidly outnumbered those focused on methods and climate science—cumulatively, by more than three-to-one.

We shall address the wider trend concerning 'risk' rhetoric in a forthcoming study. See table 3, however, for examples of the pervasiveness of 'risk' language in ExxonMobil Corp's public communications about AGW.

Table 2. Example quotations (coding units) from Mobil/ExxonMobil Corp advertorials expressing (left) acknowledgment and (right) doubt that AGW is (top row) real and human-caused, (middle row) serious, and (bottom row) solvable. Quotations are sourced only from advertorials not included in [1]. For each position, two examples are given: the first typifies a relatively 'strong' quotation, the second a relatively 'mild' one (except AGW as serious, for which only one new advertorial expresses acknowledgment; and except for AGW as solvable, for which only 'Doubt' is coded). Substantiating quotations for all advertorials are provided in section S4, supplementary information.

	Acknowledge		Doubt	
AGW as real & human-caused (EP1,2,3)	**2007**	Title: 'Saving Energy and Reducing Greenhouse Gas Emissions'. 'Two weeks ago, we described some of the steps ExxonMobil is taking to address the risk of climate change. These included working to improve energy efficiency and fuel economy, and groundbreaking research into low-emissions technologies. This week, we focus on consumers…industry, consumers and policy-makers all have a role to play in addressing the risks of climate change' [21].	**2000**	Title: 'Political cart before a scientific horse'. 'The Clinton administration has released a draft overview of the purported potential effects of climate change on specific U.S. geographic regions and economic sectors…But as climate scientists will tell you, we currently have neither the knowledge nor the tools to [produce an accurate assessment]…Climate models are evolving research tools but are not yet capable of predicting Earth's global climate and are currently unsuitable for making national or regional assessments'. Advertorial cites 'key scientific uncertainties' and quotes Freeman J. Dyson, calling climate models 'unreliable'. 'Most of the underlying reports and analyses are not yet available for scientific peer review…' [this was untrue—see [16]] [14].
	2008	'To meet this [higher future global energy] demand, while addressing the risks posed by rising greenhouse gas emissions, we will need to call upon a broad mix of energy sources' [22].	**2007**	'Climate remains an extraordinarily complex area of scientific study. But the risks to society and ecosystems from climate change could prove to be significant—so despite the areas of uncertainty that do exist, it is prudent to develop and implement strategies that address the risks' [20].

(continued)

Table 2. (Continued).

	Acknowledge		Doubt	
AGW as serious (IP1,3)	**2005**	"'Climate change is a serious and long-term challenge that has the potential to affect every part of the globe." These quotes—with which we agree entirely—were among those endorsed by government leaders at the recent G8 meeting in Gleneagles, Scotland' [23].	**1993**	Title: 'Apocalypse no'. 'For the first half of 1992, America was inundated by the media with dire predictions of global warming catastrophes…Unfortunately, the media hype proclaiming that the sky was falling did not properly portray the consensus of the scientific community. After the Earth Summit, there was a noticeable lack of evidence of the sky actually falling and subsequent colder than normal temperatures across the country cooled the warming hysteria as well'. 'If nothing else, [The Heidelberg Appeal's] message is illustrative of what's wrong with so much of the global warming rhetoric. The lack of scientific data'. Quoting Robert C. Balling: "there is a large amount of empirical evidence suggesting that the apocalyptic vision is in error and that the highly touted greenhouse disaster is most improbable". Quoting S. Fred Singer: "the net impact [of a modest warming] may well be beneficial". 'All of which would seem to suggest that the jury's still out on whether drastic steps to curb CO_2 emissions are needed' [25].
			1996	'Such speed [of international climate action] may not be needed or even desirable given what we know and do not know about the economic and environmental impact of what climate change might produce' [26].
AGW as solvable (SP1)			**1996**	UN-sponsored climate action 'is likely to cause severe economic dislocations…If developed nations act *alone* to reduce emissions, the staggering cost imposed on energy-intensive industries will drive nations to export much of their industrial base to countries with less stringent controls. World economic health will suffer as nations are forced to switch from fossil fuels, saddled with large carbon taxes and driven to prematurely scrap many factories and machinery. The dislocations will be even more severe if the solutions are not implemented globally…Jobs and livelihoods are at stake [in deciding on climate policy]' [26].
			2007	'Businesses, governments and NGOs are faced with a daunting task: selecting policies that balance economic growth and human development with the risks of climate change' [18, 19].

3.2. Impact Levels (ILs)—AGW as serious

Figure 1(b) is a timeline of the overall positions of 180 documents on AGW as serious. ILs for Internal, Peer-Reviewed, and Non-Peer-Reviewed documents are reproduced from [1]. ILs are shown for 29 Advertorials, spanning 1973–2005, found to express a position. For each category and for all documents that take a position, figure 2(b) shows the fractions of documents that take that position. For both spans of documents shown in figure 2(b) (left bar: 1973–2014; right bar: 1989–2004), positions on AGW as serious vary significantly across document categories at $p < 0.1$ (FET: (1973–2014) $p = 0.066$; (1989–2004) $p = 0.061$).

3.2.1. Peer-reviewed, non-peer-reviewed, and internal documents

For detailed descriptions of the positions of Exxon and ExxonMobil Corp's peer-reviewed, non-peer-reviewed, and internal documents, see [1]. In summary, figures 1(b) and 2(b) show that over the timespan of all documents (left bars in figure 2(b)[1]; see right bars for 1989–2004), of the 10 peer-reviewed publications that discuss the potential impacts of AGW, 60% (6/10) take a position of 'Acknowledge', 30% (3/10) of 'Doubt', and 10% (1/10) of 'Acknowledge and Doubt'. Non-peer-reviewed documents offer a mix of positions. Among the 47% (22/47) that take a position, 45% (10/22) 'Acknowledge', 41% (9/22) 'Doubt', and 14% (3/22) 'Acknowledge and Doubt'. Finally, internal documents also typically acknowledge the potential for serious impacts, but also highlight uncertainties. Of the 53% (17/32) of documents with a position, 35% (6/17) 'Acknowledge' and 47% (8/17) 'Acknowledge and Doubt'.

3.2.2. Advertorials

Mobil and ExxonMobil Corp's advertorials overwhelmingly take the position of 'Doubt', consistent with our original findings (e.g. peer-reviewed publications versus advertorials, FET: (1973–2014) $p = 0.043$; (1989–2004) $P = 0.014$). Figures 1(b) and 2(b) (right bars) show that over the period 1989–2004 covered in our original analysis, of the 5.9% (27/457) of advertorial search results that take a position (including six new advertorials from our ProQuest searches), 66.5% (18/27) express 'Doubt', with the remainder split between 'Acknowledge' and 'Acknowledge and Doubt' (4/27 = 15% and 5/27 = 18.5%, respectively). A characteristic example (table 2, middle row) not included in our original dataset is a 1996 Mobil advertorial saying that 'such speed [of international climate action] may not be needed or even desirable given what we know and do not know about the economic and environmental impact of what climate change might produce' [26]. The 2000 ExxonMobil Corp advertorial discussed earlier claims that the US National Assessment 'report's language and logic appear designed to emphasize selective results to convince people that climate change will adversely impact their lives'—implying that it will not [14, 15]. A third example is a 1993 Mobil advertorial entitled 'Apocalypse No' [25], which claims that 'dire predictions of global warming catastrophes' in 1992 were 'media hype' that 'did not properly portray the consensus of the scientific community'. It goes on to argue that 'what's wrong with so much of the global warming rhetoric' is 'the lack of solid scientific data', and alleges 'a noticeable lack of evidence of the sky actually falling' and 'colder than normal temperatures' in the US The advertorial quotes prominent climate contrarian Robert C. Balling, who argues 'that the apocalyptic vision is in error and that the highly touted greenhouse disaster is most improbable'. The advertorial also quotes physicist S Fred Singer, well known at the time for challenging the scientific evidence of stratospheric ozone depletion, claiming that: 'the net impact [of a modest warming] may well be beneficial' [27].

Expanding beyond our original analysis to include all years has little effect on the overall result: 'Doubt' continues to dominate (19/29 = 66%), while 'Acknowledge' and 'Acknowledge and Doubt' make up the difference (5/29 = 17% apiece). Post-2004, advertorials are virtually silent about the seriousness of AGW (beyond generic 'risk' statements—see [1]). In other public communications, however, this doubt has continued (a few examples are given in table 3—see ExxonMobil Corp statements from ~2008 onwards).

3.3. Solvable Levels (SLs)—AGW as solvable

Positions on AGW as solvable vary significantly across document categories (FET: (all years with positions, 1981–2008) $p = 9.0 \times 10^{-11}$; (1989–2004) $p = 6.9 \times 10^{-10}$). Expressed as a fraction of the total number of documents per category communicating any positions on AGW (real and human-caused, serious, or solvable), figure 2(c) (left bars[1]) shows that over the timespan of all documents, only 4% (2/48) of peer-reviewed papers express 'Doubt' that AGW is solvable. Internal and non-peer-reviewed materials also express relatively low levels of doubt: 14% (3/21) and 25% (9/36), respectively. In contrast, 58% (45/77) of advertorials do so (e.g. peer-reviewed publications versus advertorials: $p = 9.1 \times 10^{-11}$, FET). Similarly, figure 2(c) (right bars) shows that over the period 1989–2004 covered in our original analysis, levels of 'Doubt' are: 6% (2/31) of peer-reviewed papers, 22% (4/18) of non-peer-reviewed documents, and 64% (37/51) of advertorials (e.g. peer-reviewed publications versus advertorials: $p = 2.2 \times 10^{-9}$, FET).

A characteristic example of doubt that AGW can be effectively addressed (table 2, bottom row) is a 2000 ExxonMobil Corp advertorial (not included in our original dataset) that says the Kyoto Protocol to the United Nations Framework Convention on

Table 3. Examples of public doubt about AGW either directly communicated or indirectly funded by ExxonMobil Corp following the merger of Exxon and Mobil. Quotations are sourced from documents not included in our content analysis, such as company reports, speeches, newspaper accounts, and archived websites. Although we do not formally code the positions of these statements on AGW, and the relative 'strengths' of doubt vary from statement to statement, ExxonMobil Corp's direct representations through 2007/8 appear to express doubt about AGW as real and human-caused. Through to the present day, the company continues to itself question the 'competency' of climate models and the role of humans as the 'principal drivers of climate change', yet emphasis also shifts to promoting doubt about AGW as serious and solvable (as indicated, most statements also include 'risk' rhetoric). Examples are also given of third-party individuals and organizations funded by ExxonMobil Corp that have communicated doubt about AGW as real and human-caused, serious, or solvable in the recent past and/or present.

Year	Publication	Quotation
2000	Company report (preface by CEO Lee Raymond) [106]	Raymond: '[W]e do not now have a sufficient scientific understanding of climate change to make reasonable predictions and/or justify drastic measures…the science of climate change is uncertain…'. '[N]atural period of warming' (ice ages), 'solar activity', '[v]olcanic eruptions, El Nino': 'With all this natural climate 'noise' and the complexities of measurement, science is not now able to confirm that fossil fuel use has led to any significant global warming…Currently, there does not appear to be a consensus among scientists about the effect of fossil fuel use on climate'. Risk rhetoric: 'it may pose a legitimate long-term risk…'.
2001	'Climate talking points' in press release [44]	'Misinformation exists over the role and membership of IPCC: it is not a research organization and its members are not scientists… scientists work together only in the small teams that draft individual chapters…[IPCC's climate science models] have…fundamental gaps in basic understanding…'. Regarding the 'Hockey Stick' graph showing global warming: 'The error bars are huge, yet some prefer to ignore them'. Risk rhetoric: 'long-term risk(s)'.
2001	Lee Raymond, speech [105]	'We need good, and better, climate science…if we cannot forecast the weather a week from now, I would be suspect of our ability to forecast the climate 100 years from today'. Risk rhetoric: 'risks'.
2001	Press release [106]	'[T]here is no consensus about long-term climate trends and what causes them…during the 1970's [*sic*], people were concerned about global cooling'. Risk rhetoric: 'long-term risks'.
2002	Lee Raymond, speech [107]	'We in ExxonMobil do not believe that the science required to establish this linkage between fossil fuels and warming has been demonstrated—and many scientists agree…[T]his is because of incomplete data and methodology and the overarching role of natural variability'. Risk rhetoric: 'risk'.
2004	Company report [108]	'ExxonMobil recognizes that although scientific evidence remains inconclusive, the potential impacts of greenhouse gas emissions…may prove to be significant…Climate: Infinitely more complex than weather…[T]he cause of this [global warming] trend and whether it is abnormal remain in dispute…[T]he geological record…shows considerable variation'. Cites numerous non-human factors influencing climate. Risk rhetoric: 'risks'.
2005	Academic article funded by ExxonMobil (also Charles G Koch Charitable Foundation and American Petroleum Institute) [109]	'[T]he hypothesis of a CO_2-dominated warming of the Arctic is not likely consistent with the large decadal-and-multidecadal warming and cooling signals contained in the Arctic-wide SAT record'.
2005	Lee Raymond, television interview [96]	'There is a natural variability that has nothing to do with man…It has to do with sun spots…with the wobble of the Earth…[T]he science is not there to make that determination [as to whether global warming is human-caused]…[T]here are a lot of other scientists that do not agree with [the National Academy and IPCC]…[T]he data is not compelling'.
2006–2007	ExxonMobil website & *2005 Corporate Citizenship Report* [110]	'Climate science is complex…the extent to which recent temperature changes can be attributed to greenhouse gas increases remains uncertain…[G]aps in the scientific basis for theoretical climate models and the interplay of significant natural variability make it very difficult to determine objectively the extent to which recent climate changes might be the result of human actions'. Risk rhetoric: 'risk(s)'.
2007	Academic (non-peer-reviewed) article funded by ExxonMobil (also Charles G Koch Charitable Foundation and American Petroleum Institute) [111]	'[I]t is highly premature to argue for the extinction of polar bear [*sic*] across the circumpolar Arctic within this century…It is certainly premature, if not impossible, to tie recent regional climatic variability in this part of central Canada to anthropogenic greenhouse gases and, further, to extrapolate species-level conditions on this basis…[T]here is no ground for raising public alarm about any imminent extinction of Arctic polar bears'.

(continued)

Table 3. (Continue).

Year	Publication	Quotation
2008	CEO Rex Tillerson, interview [112]	'…to not have a debate on [AGW] is irresponsible…To suggest that we know everything we need to know about these issues is irresponsible…Anybody that tells you that they got this figured out is not being truthful. There are too many complexities around climate science for anybody to fully understand all of the causes and effects and consequences of what you may chose to do to attempt to affect that. We have to let scientists to [*sic*] continue their investigative work, unencumbered by political influences'.
2010	Rex Tillerson, Congressional testimony [113]	'[T]here is no question climate is changing, that one of the contributors to climate change are greenhouse gases that are a result of industrial activities—and there are many greenhouse gases besides CO_2…[T]he real challenge I think for all of us is understanding to what extent and therefore what can you do about it…[L]et us continue to support the scientific investigation…It is extremely complicated…So, yes, we acknowledge that it is a contributing factor. Where I think we have differences [is that] we understand the difficulties of modeling the science…[T]here is not a model available today that is competent…So we say keep studying it'. Risk rhetoric: 'risk management'.
2012	Rex Tillerson, speech [114]	'[T]he competencies of the [climate] models are not particularly good…We cannot model aerosols; we cannot model clouds, which are big, big factors in how the CO_2 concentrations in the atmosphere affect temperatures…[O]ur ability to predict, with any accuracy, what the future's going to be is really pretty limited…I am not disputing that increasing CO_2 emissions in the atmosphere is going to have an impact. It will have a warming impact. The—how large it is is [*sic*] what is very hard for anyone to predict. And depending on how large it is, then projects how dire the consequences are'.
2013	Rex Tillerson, television interview [115]	'[T]he facts remain there are uncertainties around the climate, climate change, why it is changing, what the principal drivers of climate change are. And I think the issue that I think is unfortunate in the public discourse is that the loudest voices are what I call the absolutist, the people who are absolutely certain that it is entirely man-made and you can attribute all of the climate change to nothing but man-made burning of fossil fuels…[T]here are other elements of the climate system that may obviate this one single variable that we are concentrating on because we are concentrating on a single variable in a climate system that has more than 30 variables. We are only working on one. And so that's that uncertainty issue…'. Risk rhetoric: 'risk(s)', 'serious risks', 'managing risks'.
2013	Rex Tillerson, speech [116]	'If you examine the temperature record of the last decade, it really had not changed…Our ability to project with any degree of certainty the future is continuing to be very limited…[O]ur examination about the models are [*sic*] that they are not competent'. Risk rhetoric: 'risk'.
2014	ExxonMobil affiliate, Syncrude [117]	Syncrude submits that the production and consumption of petroleum fuels is not dangerous and does not pose a risk to human health or safety'.
2015	Senator Jim Inhofe (R-OK), funded by ExxonMobil [118]	'[W]e keep hearing that 2014 has been the warmest year on record. I ask the Chair, 'You know what this is?' It's a snowball, and that's from just outside here, so it's very, very cold out'.
2015	Rex Tillerson, speech [119]	'We do not really know what the climate effects of 600 ppm versus 450 ppm will be because the models simply are not that good'. Risk rhetoric: 'risk management'.
2017	Rex Tillerson, Congressional testimony [120, 121]	'I understand these [greenhouse] gases [due to 'combustion of fossil fuels'] to be a factor in rising temperature, but I do not believe the scientific consensus supports their characterization as the 'key' factor'. Risk rhetoric: 'risk'.
1992-2018	American Legislative Exchange Council, funded by ExxonMobil [122–124]	'Global Climate Change is Inevitable. Climate change is a historical phenomenon and the debate will continue on the significance of natural and anthropogenic contributions'. (2020)
2002-present	National Black Chamber of Commerce, funded by ExxonMobil [125–127]	'There is no sound science to support the claims of Global Warming'. (2020)

Climate Change involved 'highly unrealistic carbon reduction goals' that were 'not possible' for the US to meet [28]. 'Ambitious public policies and international treaties that assume very rapid change in total energy use are simply unrealistic' and 'attempts to mandate such change are fraught with risk'. Another ExxonMobil Corp advertorial, which appeared twice in 2007, says that 'businesses, governments and NGOs are faced with a daunting task: selecting policies that balance economic growth and human development with the risks of climate change' [18, 19]. These advertorials echo two of the prominent themes of 'Doubt' identified in our original analysis: (i) an alleged dichotomy between climate mitigation and poverty reduction, and (ii) the allegedly severe adverse economic impacts of mitigation [1]. A third example is a 1996 Mobil advertorial that states: '[UN-sponsored climate action] is likely to cause severe economic dislocations at a time when many nations are striving for growth and jobs...World economic health will suffer as nations are forced to switch from fossil fuels, saddled with large carbon taxes and driven to prematurely scrap many factories and machinery…Jobs and livelihoods are at stake' [26].

As might be expected, the content and tone of advertorials change with time. As the scientific evidence of AGW strengthened in the early 2000s, advertorials began to include discussion of options for greenhouse gas emissions reductions, such as investment in energy efficiency and technology research and development. This is the context in which the third 'Doubt' argument we identified in our original study appears: insisting on the limitations of renewable energy [1]. A 2001 ExxonMobil Corp advertorial expresses a characteristic sentiment: 'Though promising, renewable energy's potential should be tempered with realism' [29]. The advertorial points out that wind power 'generally enjoys tax subsidies', yet says nothing about the much larger subsidies that fossil fuels receive [30–32]. In various forms, the advertorials reinforce the presumed inevitability of continued fossil fuel dominance [33–36].

3.4. Stranded fossil fuel assets

As discussed in [1], 24 of the analyzed documents allude to the concept of stranded fossil fuel assets. Our updated analysis finds that, as before, no advertorials address the issue. Therefore, the contrast across document categories remains clear and statistically significant: the threat of stranded assets is recognized in internal and academic documents, but never mentioned in advertorials (FET: (all years) $p = 3.3 \times 10^{-7}$; (1989–2004) $p = 3.2 \times 10^{-6}$).

3.5. Summary of results

Our ProQuest searches described herein add 18 advertorials expressing positions on AGW (real and human-caused, serious, or solvable) to those included in our original analysis spanning 1989–2004, and 26 outside of these years (these new documents are indicated by yellow highlights in table S4, supplementary information).

An updated analysis of the period 1989–2004 continues to yield statistically significant results, and our conclusions therefore remain unchanged: between 1989–2004, Mobil and ExxonMobil Corp advertorials overwhelmingly expressed doubt about AGW as real and human-caused, serious, and solvable. Indeed, having augmented our archive of advertorials, and with our prior document codings undisputed by ExxonMobil Corp's critiques, our original conclusions are now strengthened [2, 3].

Expanding beyond the timeframe of our original analysis negligibly affects the overall positions of advertorials on AGW as serious and solvable: Over all years with advertorial positions (1973–2005 and 1988–2008, respectively), 'Doubt' remains the overwhelming position in both respects (sections 3.2.2 and 3.3). The predominant stance over all years on AGW as real and human-caused also remains 'Doubt' (section 3.1.2). From 2005–09 this is reduced, with the positions of advertorials transitioning from mostly 'Doubt' (1989–2004) to mostly 'Acknowledge', punctuated by doubt in 2007 (figure 1(a)).

Most of these recent 'Acknowledgments' are ambiguous. As described in section 3.1.2, the vast majority (93%) are implicit: in no case does ExxonMobil Corp state that climate change is real and human-caused. Nor do they acknowledge a change in their position. In this sense, the acknowledgments are asymmetric compared to the doubt promoted in earlier advertorials. Earlier advertorials *explicitly* challenged climate science; later ones merely sidestepped it, citing undefined 'risk(s)' of climate change (87% of post-2004 advertorials) and discussing options for emissions reductions without stating why they are necessary.

4. Discussion

Our results imply at least three ways in which Exxon, Mobil, and ExxonMobil Corp have, variously, misled the public about AGW. Sections 4.1–4.3 address each of these in turn.

4.1. Exxon and ExxonMobil Corp misled with discrepant communications

The first way the public was misled derives from the results of our content analysis and relies on a line of reasoning presented in our original paper: comparison across company document categories.

Figure 2(d) shows that from 2000 through 2004 (after the Exxon-Mobil merger), the overwhelming position of ExxonMobil Corp advertorials on AGW as real and human-caused continued to be 'Doubt' (12/16 = 75%). The discrepancy between this doubt and the predominant acknowledgment in Exxon

and ExxonMobil Corp peer-reviewed, non-peer-reviewed, and internal documents shown in figure 1(a) is statistically significant (FET: $p = 8.5 \times 10^{-8}$, $p = 0.0079$, and $p = 1.6 \times 10^{-5}$, respectively, for all peer-reviewed, non-peer-reviewed, and internal documents through 2004). From a statistical standpoint it is essentially certain that whereas Exxon and ExxonMobil Corp's private and academic documents predominantly acknowledge that climate change is real and human-caused, ExxonMobil Corp's advertorials disproportionally—and overwhelmingly—promote doubt on the same matter. This unambiguously reaffirms our original conclusion.

The contrast across document categories—that is, evidence of misleading communications—is also clear when analyzed at a year-to-year scale (figure 1(a)). During the early 2000s, ExxonMobil Corp's peer-reviewed publications and advertorials in the same years contradict one another. For instance, in 2004, one peer-reviewed ExxonMobil Corp publication refers to 'the fraction of anthropogenic CO_2 emissions that remains in the atmosphere, and contributes to the radiative forcing of climate'; another presents 'cumulative CO_2 emissions' for a '550 ppm stabilization trajectory'; and a third discusses 'CO_2 disposal as an option to mitigate climate change from an enhanced greenhouse effect' [37–39]. Yet, that same year, one ExxonMobil Corp advertorial stressed the alleged 'debate over climate change' and fostered uncertainty that AGW had been observed, saying 'last year's record summer heat in Europe does not confirm a warming world' (climate attribution assessments have since disproved this claim [40]). They insisted that 'in the face of natural variability and complexity, the consequences of change in any single factor, for example greenhouse gases, cannot readily be isolated and prediction becomes difficult… scientific uncertainties continue to limit our ability to make objective, quantitative determinations regarding the human role in recent climate change or the degree and consequences of future change' [41]. Another advertorial the same year emphasized the 'gaps and uncertainties that limit our current ability to know the extent to which humans are affecting climate and to predict future changes caused by both human and natural forces' [42].

Given these discrepancies it is clear that ExxonMobil Corp misled the public over this period. The historical record categorically refutes ExxonMobil Corp's recent claims that only Mobil was responsible for misleading advertorials (and for other misleading communications, as we discuss below). Misleading advertorials did not cease when Exxon and Mobil merged.

Figures 2(e) and (f) show that across all ExxonMobil Corp advertorials with positions on AGW as serious and solvable, respectively, levels of 'Doubt' outweigh those in peer-reviewed, non-peer-reviewed, and internal documents (Serious, FET: $p = 0.10$, $p = 0.87$, and $p = 0.093$, respectively; Solvable, FET: $p = 6.0 \times 10^{-6}$, $p = 0.063$, and $p = 0.0027$, respectively). These discrepancies again demonstrate that ExxonMobil Corp misled the public.

Additionally, peer-reviewed, non-peer-reviewed, and internal documents from Exxon and ExxonMobil Corp acknowledge the risks of stranded assets (24 times), whereas ExxonMobil Corp's advertorials do not ($p = 3.3 \times 10^{-7}$, FET). This imbalance has not been disputed by ExxonMobil Corp in its critiques of our original study [2, 3].

The significance of these discrepancies is compounded by the imbalance in the physical and intellectual accessibility of advertorials versus other document categories. As evidenced in our original study, ExxonMobil contributed to scientific articles with likely average readerships of tens to hundreds, yet raised doubts about that science in newspapers potentially read by millions of people [1].

Non-peer-reviewed Exxon and ExxonMobil Corp documents also communicate greater doubt about AGW as real and human-caused and solvable than peer-reviewed Exxon and ExxonMobil Corp publications (and, with respect to real and human-caused positions, than Exxon and ExxonMobil Corp internal documents) (figures 1(a) and (c)). Although this discrepancy is smaller, it is statistically significant at or below $p < 0.1$ (FET: (real and human-caused) $p = 0.044$ for peer-reviewed publications and $p = 0.077$ for internal memos; (solvable) $p = 0.0076$), suggesting that Exxon and ExxonMobil Corp's non-peer-reviewed communications, which tended to be more orientated towards non-scientific audiences (such as industry groups and journalists) than peer-reviewed papers, were sometimes misleading.

The non-peer-reviewed documents demonstrate that the doubt ExxonMobil Corp expressed in advertorials post-merger was not an unintentional or isolated incident: it was part of the company's broader public communications effort. As noted in our original paper, there are countless non-peer-reviewed materials beyond those included in our corpus [1]. Table 3 lists just a few examples, among them 'climate talking points' that ExxonMobil Corp distributed to reporters in 2001 as part of a press release specifically promoting their publication of two advertorials ('major ads') in the *Los Angeles Times, NYT, The Wall Street Journal*, and *The Washington Post* [43]. In step with the advertorials, the talking points question the scientific authority of the Intergovernmental Panel on Climate Change (IPCC) and the validity of the 'Hockey Stick' graph showing global warming, which was a centerpiece of the 2001 IPCC report [44].

4.2. Exxon, Mobil, and ExxonMobil Corp misled with misinforming advertorials and non-peer-reviewed publications

The second way the public was misled also derives from the results of our content analysis and relies

on a line of reasoning presented in our original paper: comparison of public company communications against available scientific information.

ExxonMobil Corp has not disputed any of our original document codings, including those identifying numerous expressions of doubt—some, factual misrepresentations—about AGW (notably in Mobil and ExxonMobil Corp advertorials and Exxon and ExxonMobil Corp non-peer-reviewed publications) [2, 3]. Using as proxies for mainstream climate science both the conclusions of the IPCC (our analysis filters for 'reasonable' doubt—see [1]) and the science of Exxon and ExxonMobil Corp itself (ExxonMobil Corp says its 'researchers recognized the developing nature of climate science at the time…[and] mirrored global understanding'), it is evident that Exxon, Mobil, and ExxonMobil Corp's public communications were inconsistent with available scientific information and therefore misled the public [45, 46].

4.2.1. What did Mobil know?

ExxonMobil Corp's critiques of our original study imply that Mobil was oblivious to the insights and warnings of mainstream climate science, even as it ran advertorials attacking that science [2]. Yet a 1997 Mobil advertorial suggests otherwise: 'We continue to sponsor research at universities…At Columbia's Lamont-Doherty Geophysical Observatory, we supported work on the role that oceans play in the climate system' [47].

Additional documents not included in our original analysis confirm that Mobil, like Exxon, had direct access to the insights of mainstream climate science [48–51]. For example, as a 1997 report by Mobil's Anthony R. Corso summarized, 'Over the past five years we have funded scientific and economic studies at The Massachusetts Institute of Technology, the Lamont-Dougherty [*sic*[2]] Geophysical Observatory of Columbia University, the Harvard-Smithsonian Astrological [*sic*] Observatory, and the Australian Bureau of Agricultural and Resource Economics'. [48] Mobil was '[f]unding [this] research to increase the understanding of the science and economics of global climate change'.

According to a newly discovered internal budget proposal, '1994 Mobil Foundation Grant Recommendations', Mobil's funding at Columbia University included $25 000 per year in 1991 and 1992 and would continue at the same rate in 1993 and 1994 [49]. Mobil described the university's Lamont-Doherty laboratory as 'a world-wide leader in earth and atmospheric studies' and said the purpose of the grant was to 'develop an improved computer model [that] will become part of the larger models predicting the impact of increased greenhouse gas emissions on global climate'. 'Ultimately', they noted, 'these models will be the basis for regulatory action'. 'Benefits to Mobil Foundation' included '[t]echnical information and understanding…key to Mobil's ability to participate in the debate on [potentially imminent greenhouse gas] regulations...Mobil scientists involved in the global warming issue can gain first hand understanding of the role of the oceans in global warming and develop personal relationships with some of the key experts…[P]articipating at this level is far more valuable to Mobil than merely reading papers…'.

In other words, Mobil had scientists studying AGW and learning from some of the same groups of independent climate experts as Exxon scientists. (For example, from the late 1970s through the mid-1980s, Exxon spent tens of thousands of dollars funding a 'cooperative program with Lamont-Doherty' in which scientists at Exxon and Columbia University collaboratively co-authored AGW project proposals and conducted AGW research [52–59]. ExxonMobil Corp has continued to fund the Lamont-Doherty Earth Observatory throughout most of the 2000s to present [60–71].) In turn, those Exxon scientists overwhelmingly acknowledged AGW as real and human-caused. Mobil's access to these same mainstream scientific resources preceded and paralleled its publication of advertorials attacking climate science and its implications, further demonstrating that Mobil knowingly misled the public.

Mobil was also an active member of the American Petroleum Institute (API), and numerous documents record API's early awareness of the potential AGW dangers of its products. These include API-commissioned research on carbon dioxide at the California Institute of Technology in 1955; an in-person warning to API by physicist Edward Teller in 1959; API monitoring of warnings about AGW by President Johnson's Science Advisory Committee in 1965; and API-commissioned research on AGW at Stanford Research Institute in 1968 and 1969 [72–75].

4.3. Exxon and ExxonMobil Corp misled with additional direct and indirect climate denial

The third way the public was misled relies on an additional line of reasoning that was not explicitly discussed in our original paper: comparison of the results of our content analysis against an extensive literature of scholarly research and investigative journalism that has chronicled the company's history of directly and indirectly perpetuating climate science misinformation.

ExxonMobil Corp has not disputed our document codings, which reveal overwhelming acknowledgement by both Exxon and ExxonMobil Corp scientists that AGW is real and human-caused [2, 3]. At the same time, it is well-documented (based on documents beyond those included in our analysis, as well as on some non-peer-reviewed documents

[2]Correct spelling is Lamont-Doherty.

included herein) that (i) from at least the 1990s until at least 2015 (and arguably to this day), Exxon and ExxonMobil Corp have sometimes publicly promoted doubt about climate science through direct company communications; and that (ii) from at least the late 1980s through to the present, Exxon and ExxonMobil Corp have funded groups and individuals and participated in organizations that cast doubt in public on climate science [27, 76–103] (table 3 provides a few examples). To our knowledge, ExxonMobil has never disputed its history of direct and indirect climate denial. Likewise, Exxon and ExxonMobil Corp have a track record of directly and indirectly promoting public doubts about AGW as serious and solvable that are inconsistent with the views of company scientists chronicled by our analysis (again, see table 3 for examples).

This comparison—between what ExxonMobil knew and its broader history of climate denial and delay—is an inherent, central line of reasoning in many journalistic and legal investigations of the company. It highlights an important point: Our work does not stand in isolation. At the onset of our study, substantial evidence already existed to suggest that ExxonMobil had misled the public on a variety of aspects of AGW and in a variety of ways [27, 77–82]. The purpose of our study was to bring to bear an additional, complementary empirical methodology to test the hypothesis that ExxonMobil misled the public. Our results show this to be the case.

5. Conclusion

We have updated our original analysis to include additional Mobil and ExxonMobil Corp advertorials in the *NYT*, and have also introduced new documents never previously analyzed in the peer-reviewed literature. Among other things, we have shown that misleading communications, direct and indirect, emanated from both Exxon and Mobil before their 1999 merger, and continued thereafter. We have also introduced new evidence that Mobil was aware of developments in mainstream climate science, even as they took out advertorials that challenged it. We now conclude with even greater confidence that Exxon, Mobil, and ExxonMobil Corp misled the public about climate change.

The history of ExxonMobil's communications about AGW is consistent with what scholars have labeled merchandising doubt, manufacturing doubt, or doubt-mongering [27, 128–135]. A party whose interests are threatened by scientific findings may seek to protect those interests by casting doubt on the science: 'emphasiz[ing] the uncertainty', as a 1988 Exxon strategy memo put it, focusing on 'debate', and suggesting that remedies are unavailable, unrealistic, too expensive, or otherwise undesirable [136]. Often these claims are not made outright, but are insinuations, which are harder to refute. They may also attack scientists, suggesting they are unreliable or biased. Many of these strategies are evident in ExxonMobil's communications, as well as in their public and private critiques of our work that we have here addressed.

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Data availability statement

The data that support the findings of this study are openly available.

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LETTER

Assessing ExxonMobil's climate change communications (1977–2014)

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Supplementary material for this article is available online

Abstract

This paper assesses whether ExxonMobil Corporation has in the past misled the general public about climate change. We present an empirical document-by-document textual content analysis and comparison of 187 climate change communications from ExxonMobil, including peer-reviewed and non-peer-reviewed publications, internal company documents, and paid, editorial-style advertisements ('advertorials') in *The New York Times*. We examine whether these communications sent consistent messages about the state of climate science and its implications—specifically, we compare their positions on climate change as real, human-caused, serious, and solvable. In all four cases, we find that as documents become more publicly accessible, they increasingly communicate doubt. This discrepancy is most pronounced between advertorials and all other documents. For example, accounting for expressions of reasonable doubt, 83% of peer-reviewed papers and 80% of internal documents acknowledge that climate change is real and human-caused, yet only 12% of advertorials do so, with 81% instead expressing doubt. We conclude that ExxonMobil contributed to advancing climate science—by way of its scientists' academic publications—but promoted doubt about it in advertorials. Given this discrepancy, we conclude that ExxonMobil misled the public. Our content analysis also examines ExxonMobil's discussion of the risks of stranded fossil fuel assets. We find the topic discussed and sometimes quantified in 24 documents of various types, but absent from advertorials. Finally, based on the available documents, we outline ExxonMobil's strategic approach to climate change research and communication, which helps to contextualize our findings.

1. Introduction

In 2016, Attorneys General (AGs) of 17 US states and territories announced that they 'are exploring working together on key climate change-related initiatives, such as ongoing and potential investigations' into whether ExxonMobil Corporation and other fossil fuel companies may have violated, variously, racketeering, consumer protection, or investor protection statutes through their communications regarding anthropogenic global warming (AGW) [1, 2]. (Unless specified otherwise, we refer to ExxonMobil Corporation, Exxon Corporation, and Mobil Oil Corporation as 'ExxonMobil'.) As part of a probe that began in 2015, New York Attorney General Eric Schneiderman has issued multiple subpoenas to ExxonMobil under the state's Martin Act and alleged that the company's accounting of climate risk 'may be a sham' [3–6]. Massachusetts Attorney General Maura Healey is simultaneously investigating ExxonMobil, stating, 'Fossil fuel companies that deceived investors and consumers about the dangers of climate change should be held accountable' [7, 8]. US Virgin Islands Attorney General Claude Walker has said that he is investigating ExxonMobil for potentially violating the territory's anti-racketeering law [9]. Also in 2016, the US Securities and Exchange Commission (SEC) began a federal investigation into whether ExxonMobil appropriately discloses the business risks of AGW, and how it values its assets and reserves [10]. We offer no view on the legal issues raised by ongoing investigations.

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ExxonMobil has responded stating, 'We unequivocally reject allegations that ExxonMobil suppressed climate change research contained in media reports that are inaccurate distortions of ExxonMobil's nearly 40 year history of climate research. We understand that climate risks are real. The company has continuously, publicly and openly researched and discussed the risks of climate change, carbon life cycle analysis and emissions reductions' [11]. In particular, ExxonMobil's website and statements offer a '10 page document listing the over 50 peer-reviewed articles on climate research and related policy analysis from ExxonMobil scientists from 1983 to the present' [11–15]. ExxonMobil argues that this list, entitled 'Exxon Mobil Contributed Publications', 'undercuts the allegation . . . that ExxonMobil sought to hide our research.' The company has also published some of its internal company documents, originally made public by journalists at *InsideClimate News* (*ICN*) [16, 17] (and simultaneously reported by Columbia University's Graduate School of Journalism and the *Los Angeles Times* [18]), to demonstrate that 'allegations are based on deliberately cherry-picked statements' [14]. 'Read all of these documents and make up your own mind,' ExxonMobil has challenged [14].

This paper takes up that challenge by analyzing the materials highlighted by the company, and comparing them with other publicly available ExxonMobil communications on AGW. The issue at stake is whether the corporation misled consumers, shareholders and/or the general public by making public statements that cast doubt on climate science and its implications, and which were at odds with available scientific information and with what the company knew. We stress that the question is not whether ExxonMobil 'suppressed climate change research,' but rather how they communicated about it [11].

Our analysis covers the publication period of the documents made available by ExxonMobil: 1977–2014. These documents include peer-reviewed and non-peer-reviewed publications (academic papers, conference proceedings, reports, company pamphlets, etc) and internal documents. Our analysis compares these documents with ExxonMobil's public outreach in the form of paid, editorial-style advertisements—known as 'advertorials'—published on the Op-Ed page of *The New York Times* (*NYT*) [19]. We focus on advertorials because they come directly from ExxonMobil and are an unequivocally public form of communication 'designed to affect public opinion or official opinion' [20]. Kollman has found that advertorializing is second only to mobilizing group members as the most commonly used outside lobbying technique [20, 21]. We examine whether these communications sent consistent messages about the state of climate science and its implications, or whether there is a discernable discrepancy between the company's public and private communications.

Our study offers the first empirical assessment and intercomparison of ExxonMobil's private and public statements on AGW[2]. By bringing to bear the quantitative methodologies of consensus measurement [22, 23] and content analysis [24–28], our results add to (i) earlier analyses of ExxonMobil's communication practices [19, 20, 29–36], (ii) qualitative accounts of the company's AGW communications [17, 18, 37–39], and (iii) the application of consensus measurement/content analysis to AGW communications [26–28, 40, 41]. In addition, this study contributes to the broader literature on climate change denial [42–48], corporate issue management [21, 35, 49, 50] and misinformation strategies [51–55], and the social construction of ignorance [56–58].

2. Method

We adapt and combine the methodologies used to quantify the consensus on AGW by Oreskes [23] and Cook *et al* [22] with the content analysis methodologies used to characterize media communications of AGW by Feldman *et al* and Elsasser and Dunlap [27, 28]. Developed to assess peer-reviewed scientific literature, cable news, and conservative newspapers, respectively, these offer generalizable approaches to quantifying the positions of an entity or community on a particular scientific question across multiple document classes.

Our study comprises 187 documents (see table 1): 32 internal documents (from *ICN* [16], ExxonMobil [59], and Climate Investigations Center [60]); 53 articles labeled 'Peer-Reviewed Publications' in ExxonMobil's 'Contributed Publications' list [15]; 48 (unique and retrievable) documents labeled 'Additional Publications' in ExxonMobil's 'Contributed Publications' list; 36 Mobil/ExxonMobil advertorials related to climate change in the *NYT*; and 18 'Other' publicly available ExxonMobil communications–mostly non-peer-reviewed materials–obtained during our research. To our knowledge, these constitute the relevant, publicly available internal documents that have led to recent allegations against ExxonMobil, as well as all peer-reviewed and non-peer-reviewed documents offered by the company in response. They also include all discovered ExxonMobil advertorials in the *NYT* discussing AGW. Advertorials are sourced from a collection compiled by PolluterWatch based on a search of the ProQuest archive [61].

[2] There are, of course, countless additional climate change communications from ExxonMobil that could be included in future work, including archived internal documents, advertorials published in newspapers beyond the *NYT*, and non-peer-reviewed materials such as speech transcripts, television adverts, patent documents, shareholder reports, and third-party communications (for example, from lobbyists, think-tanks, and politicians funded by ExxonMobil). These documents are potentially important, but are not the focus of the present study.

Table 1. Inventory of documents analyzed. Shown for each document category are the total number of documents, their date range, source(s), and assigned types. Among peer-reviewed and non-peer reviewed documents, eight publications were found to be redundant, with similar or identical wording to seven other (strictly unique) publications. All 15 are included in our analysis. Among non-peer-reviewed documents, there are two citations provided by ExxonMobil that are identical to two others. The identical two are not included in our analysis. Sources: 'Peer-Reviewed' and 'Additional' publications are cited in the 'Exxon Mobil Contributed Publications' list [15]; 'Supporting Materials' are internal documents offered by ExxonMobil [59]; 'Other' sources refers to documents discovered independently during our research; *ICN* = *InsideClimate News*; *NYT* = *The New York Times*. *NYT* advertorials were collated by Polluter Watch [61]. For details on document types, see section S2, supplementary information, available at stacks.iop.org/ERL/12/084019/mmedia. Miscellaneous Opinions include, for example, commentaries, opinion editorials, and speeches.

			Sources						Document Types							
			Provided by ExxonMobil													
Category	No.	Dates	'Peer-reviewed'	'Additional'	'Supporting materials'	*ICN*	*NYT*	*Other*	Academic journal	Conference/ workshop proceeding	Gov. report	Book	Industry white paper	Internal doc.	Ad	Misc. opinion
Internal Documents	32	1977–1995	0	0	22	28	0	1	0	0	0	0	0	32	0	0
Peer-Reviewed	72	1982–2014	50	19	0	0	0	3	53	2	13	4	0	0	0	0
Non-Peer-Reviewed	47	1980–2014	3	29	0	3	0	12	0	24	5	2	2	0	0	13
Advertorials	36	1989–2004	0	0	0	0	36	0	0	0	0	0	0	0	36	0

To characterize each document, we read its abstract, introduction, and conclusion, and either skim or read thoroughly the rest as necessary. In the case of long documents (over ~30 pages) in which executive summaries are provided, we rely on those summaries. The documents are binned into four categories as shown in table 1: *Internal*, *Peer-Reviewed*, *Non-Peer-Reviewed*, and *Advertorial*. This allows us to distinguish communications according to degree of accessibility–a key variable in assessing the consistency of ExxonMobil's representations of AGW. Each document's manifest content is then further characterized in four ways: type, topic, position with respect to AGW, and position with respect to risks of stranded assets. Details of document types and topics are discussed in sections S2–3, supplementary information.

2.1. Document position

Research has shown that four key points of understanding about AGW—that it is real, human-caused, serious, and solvable—are important predictors of the public's perceived issue seriousness, affective issue involvement, support for climate policies, and political activism [62–66]. These four elements have also been found to underpin most narratives of AGW skepticism and denial (namely 'it's not happening', 'it's not us', 'it's not serious', and 'it's too hard') [28, 43, 67, 68]. We therefore use, *a priori*, these recognized elements as axes along which to characterize ExxonMobil's positions on AGW in its communications; positions on each of these elements form the primary codes in our content analysis (table 2). Our coding scheme is summarized below (see section S1, supplementary information for further details).

One of the authors coded all of the documents, and ambiguities were resolved through discussion between authors. To verify intercoder reliability and intercoder agreement, both authors independently coded a random subset of 36 documents (approximately 19% of the total number of documents in each category). Intracoder reliability was also calculated (see section S1.7, supplementary information).

2.1.1. 'Real & human-caused'

Tailoring the approaches of Cook *et al*, Feldman *et al*, and Elsasser and Dunlap, each document is coded by assigning 'Endorsement Points' (EP1 to EP4b, defined in table 2) to pertinent text and figures based on whether each acknowledges or doubts the scientific evidence that AGW is real and human-caused (intercoder reliability of Endorsement Points: percentage agreement = 93%; Krippendorff's (Kripp.) $\alpha = 0.84$) [22, 27, 28]. We recognize that all science involves uncertainties, and therefore that doubt is not, *ipso facto*, an inappropriate response to complex scientific information. Uncertainties are an innate and important part of reasonable scientific discourse. However, it has also been shown that uncertainty may be amplified or exaggerated in ways that are misleading and unreasonable, sustaining doubt about claims that are scientifically established [42, 52, 57, 69]. Therefore, to distinguish reasonable and unreasonable doubt, we apply two first-order filters to our Endorsement Point codings. First, in documents published on or before 1990, we exempt expressions of doubt that AGW is *real* (i.e. we deem such expressions to be reasonable at that time). Second, in documents published on or before 1995, we exempt expressions of doubt that AGW is *human-caused*. 1990 and 1995 are when the Intergovernmental Panel on Climate Change (IPCC) first concluded that AGW is real and human-caused, respectively (these are conservative thresholds insofar as many scientists had arrived at these conclusions prior to the IPCC reports; indeed, IPCC reports are based only on already-completed work) [70, 71]. Finally, based on its individual Endorsement Points, each document is assigned one overall Endorsement

Table 2. Definitions of the Endorsement, Impact, and Solvable Points used to code levels of acknowledgment of AGW as real and human-caused, serious, and solvable, respectively. See section S1, supplementary information, for details on the content analysis and coding scheme.

AGW as Real and Human-Caused Endorsement points (EPs)		Description
'Acknowledge'	(EP1) Explicit endorsement with quantification	Explicitly supports position that humans are the primary cause of global warming (with quantification)
	(EP2) Explicit endorsement without quantification	Explicitly supports position that humans are the primary cause of global warming (without quantification) or refers to anthropogenic global warming as a known fact
	(EP3a) Implicit endorsement	Implicitly supports position that humans are the primary cause of global warming. e.g. research assumes greenhouse gas emissions cause warming without explicitly stating humans are the cause
	(EP3b) Implicit endorsement of consensus	Implicitly supports position that humans are the primary cause of global warming by referring to a consensus of the scientific community
'No position'	(EP4a) No position	Does not address the cause of global warming
'Doubt'	(EP4b- 1) Uncertain of reality of AGW	Expresses position that the *reality* of recent global warming is uncertain/undefined, namely 'it's not happening'
	2) Uncertain of human contribution to AGW	Expresses position that the *human contribution* to recent global warming is uncertain/undefined, namely 'it's not us'
AGW as Serious Impact points (IPs)		Description
'Acknowledge'	(IP1) Acknowledgment	Acknowledges and/or articulates known or predicted negative impacts of global warming e.g. geophysical, economic, socio-political
'No position'	(IP2) No position	Does not address the negative impacts of global warming (beyond generic references to climate change as a 'risk')
'Doubt'	(IP3) Uncertain	Expresses position that the reality of negative impacts of global warming is uncertain/undefined/exaggerated, namely 'it's not bad'
AGW as Solvable Solvable points (SPs)		Description
'Doubt'	(SP1) Uncertain	Expresses position that the difficulties of mitigating global warming are potentially insurmountable and/or exceed the benefits, namely 'it's too hard'

Level (EL) (intercoder reliability of Endorsement Levels: 89%; Kripp. $\alpha = 0.85$): 'No Position' (all text and figures are EP4a only); 'Acknowledge' (EP1–3 only); 'Acknowledge and Doubt' (EP1–3 and EP4b); 'Reasonable Doubt' (EP4b only, deemed reasonable as defined above); or 'Doubt' (EP4b only, deemed unreasonable). 'Acknowledge and Doubt' reflects the fact that some communications acknowledge aspects of AGW yet emphasize other areas of doubt or uncertainty.

Our filtering of reasonable doubt (see also section S1.4.2, supplementary information) helps address the challenge of characterizing the positions of documents published during a period of rapidly evolving scientific opinion. Otherwise, however, our coding scheme is agnostic to each document's publication year.

2.1.2. 'Serious'

We assign 'Impact Points' (IP1 to IP3, defined in table 2) throughout each document based on its positions on AGW as having known or predicted negative impacts (for example, geophysical, economic, or sociopolitical) (intercoder reliability of Impact Points: 94%; Kripp. $\alpha = 0.86$). Each document is then assigned one of four overall Impact Levels (ILs): 'No Position' (all text and figures are IP2 only); 'Acknowledge' (IP1 only); 'Acknowledge and Doubt' (IP1 and IP3); or 'Doubt' (IP3 only) (intercoder reliability of Impact Levels: 89%; Kripp. $\alpha = 0.77$).

2.1.3. 'Solvable'

We identify documents that express 'Doubt' (SP1, defined in table 2) as to whether AGW can be mitigated or whether the costs of doing so exceed the benefits (intercoder reliability: 97%; Kripp. $\alpha = 0.84$). While the question of AGW's solvability is not resolvable on purely technical grounds, the relative extent to which documents promote doubt on the matter remains relevant to the character of climate communications, insofar as assertions that AGW

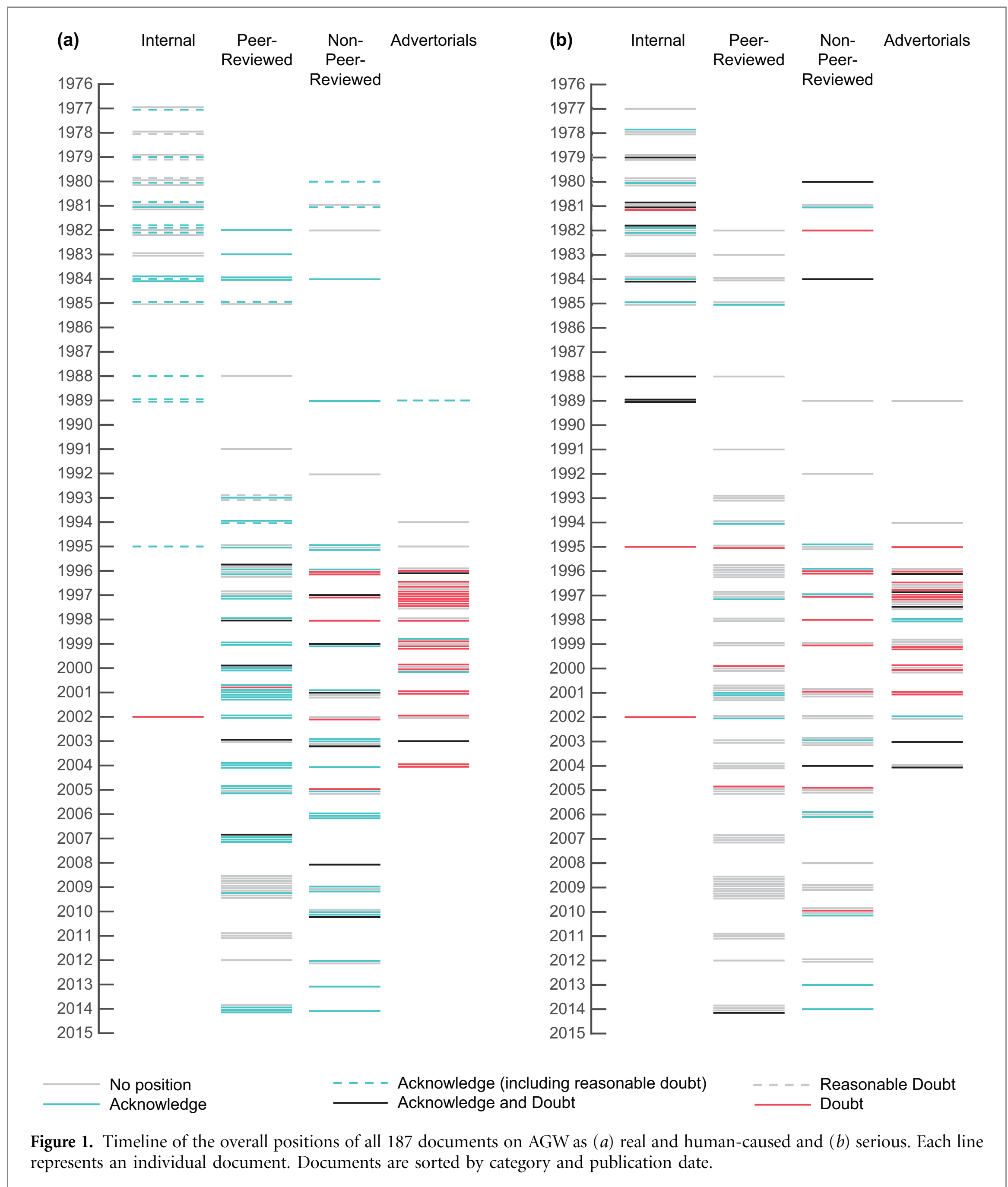

Figure 1. Timeline of the overall positions of all 187 documents on AGW as (*a*) real and human-caused and (*b*) serious. Each line represents an individual document. Documents are sorted by category and publication date.

cannot be stopped are a common component of contrarian claims [42, 72].

2.2. Risks of stranded assets

AGs and the SEC are investigating ExxonMobil's understanding and disclosures of the financial risks related to either AGW or future climate policy, and shareholders have questioned the adequacy of ExxonMobil's disclosures on this point. We examine what, if anything, has been stated on this subject in the documents examined [10, 73–75]. Across all documents, we collate and chronicle ExxonMobil's communications regarding the risks of stranded assets (intercoder reliability: 100%; Kripp. $\alpha = 1.0$). Financial documents from ExxonMobil, such as shareholder reports, are beyond the scope of this study and a topic for future investigation.

3. Results

3.1. Endorsement levels (ELs)—AGW as real and human-caused

Figure 1(*a*) is a timeline of the overall positions of all 187 documents on AGW as real and human-caused, sorted by publication date and into four categories: *Internal Documents*, *Peer-Reviewed*, *Non-Peer-Reviewed*, and *Advertorials*. Each line represents an individual document and is color-coded: No position (grey); Acknowledge (blue); Acknowledge and Doubt (black); and Doubt (red). Dashed lines indicate documents that have

Table 3. Example quotations (coding units) expressing (left) acknowledgment and (right) doubt that AGW is real and human-caused. For each document category, two examples are given: the first typifies a relatively 'strong' quotation, the second a relatively 'mild' one. Substantiating quotations for all documents are provided in section S7, supplementary information.

		Acknowledge AGW is real and human-caused (EP1,2,3)		Doubt AGW is real and human-caused (EP4b-1,2)
INTERNAL	**1979** [82]	'The most widely held theory is that:—The increase [in atmospheric CO_2] is due to fossil fuel combustion;—Increasing CO_2 concentration will cause a warming of the earth's surface;—The present trend of fossil fuel consumption will cause dramatic environmental effects before the year 2050.'	**1982** [83]	'There is currently no unambiguous scientific evidence that the earth is warming. If the earth is on a warming trend, we're not likely to detect it before 1995.'[a]
	1982 [83]	'The question of which predictions and which models best simulate a carbon dioxide induced climate change is still being debated by the scientific community. Our best estimate is that doubling of the current concentration could increase average global temperature by about 1.3° to 3.1 °C . . . .'	**2002** [84]	'A major frustration to many is the all-too-apparent bias of IPCC to downplay the significance of scientific uncertainty and gaps . . . .'
PEER-REVIEWED	**1996** [76]	'The body of statistical evidence . . . now points towards a discernible human influence on global climate.'	**2001** [85]	'A general statistical methodology . . . is proposed as a method for deciding whether or not anthropogenic influences are causing climate change.'
	1995 [86]	'We present a preliminary analysis of a geoengineering option based on the intentional increase of ocean alkalinity to enhance marine storage of atmospheric CO_2. Like all geoengineering techniques to limit climate change . . . .'	**2003** [81]	'Currently, our ability to forecast future climate is in question. Models are used to make projections of future climate, based on scenarios of future human activities and emissions, by simulating each link in the causal chain relating these scenarios to changes in climate. The estimation of the uncertainty of this causal chain remains an important scientific challenge.'
NON-PEER-REVIEWED	**1981** [87]	'The conviction in the scientific community that the observed trend of increasing carbon dioxide, if it continues, will cause a global warming is based on a variety of theoretical studies . . . the results are now fairly consistent. For a carbon dioxide doubling the calculated mean surface-air temperature increase is approximately 2 °C to 3 °C. The warming is 2 to 3 times larger in the northern polar regions . . . Other model-predicted features are shifts of precipitation and soil moisture, retreat of polar snow and sea ice, and changes of large-scale circulation patterns.'	**1996** [88]	Title: 'Global warming: who's right? Facts about a debate that's turned up more questions than answers.' ' . . . a multinational effort, under the auspices of the United Nations, is under way to cut the use of fossil fuels, based on the unproven theory that they affect the earth's climate.'
	2003 [89]	' . . . a 2 °C warming target (which can still produce adverse climate impacts) requires non-CO_2-emitting primary power in the 10 to 30 TW range by 2050.'	**2008** [90]	'Nor are [the *Oil and Natural Gas Industry Guidelines for Greenhouse Gas Reduction Projects*] intended to imply a direct connection between GHG emissions from the oil and natural gas industry and the phenomenon commonly referred to as climate change.'
ADVERTORIALS	**1999** [91]	'Reasonable concerns about the buildup of greenhouse gases in the atmosphere and their effect on earth's climate have prompted policymakers to search for a response.'	**1997** [92]	'Let's face it: The science of climate change is too uncertain to mandate a plan of action that could plunge economies into turmoil . . . Scientists cannot predict with certainty if temperatures will increase, by how much and where changes will occur. We still don't know what role man-made greenhouse gases might play in warming the planet . . . Let's not rush to a decision at Kyoto. Climate change is complex; the science is not conclusive; the economics could be devastating.'
	2003 [93]	'We humans are interacting with the geo-chemical systems of our planet on a global scale. The concentration of carbon dioxide in the atmosphere has increased by a third from its preindustrial level, and the resulting change in the acidity of the upper ocean can be detected.'[b]	**1997** [94]	Title: 'Climate change: a degree of uncertainty.' ' . . . there is a high degree of uncertainty over the timing and magnitude of the potential impacts that man-made emissions of greenhouse gases have on climate . . . To address the scientific uncertainty governments, universities and industry should form global research partnerships to fill in the knowledge gap, with the goal of achieving a consensus view on critical issues within a defined time frame . . . .'

[a] Document filtered by our analysis as reasonable due to pre-1990 publication date.

[b] Advertorial is signed by Stanford University Professor Lynn Orr, then-director of Stanford's Exxon-funded GCEP alliance, and bears the seal of Stanford University. See section S7, supplementary information, for details.

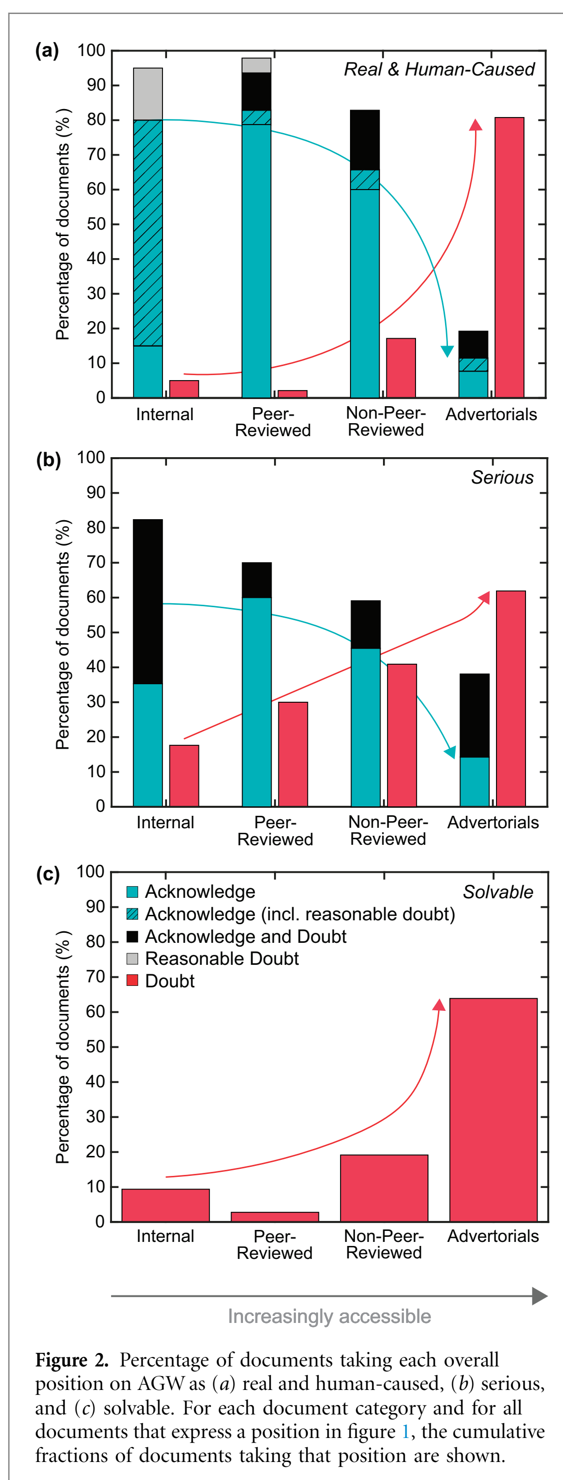

Figure 2. Percentage of documents taking each overall position on AGW as (*a*) real and human-caused, (*b*) serious, and (*c*) solvable. For each document category and for all documents that express a position in figure 1, the cumulative fractions of documents taking that position are shown.

been filtered for reasonable doubt. Table 3 presents exemplifying quotations (coding units) of varying 'strength' that illustrate the assigned positions for a selection of the documents. For each category and for all documents that express a position, figure 2(*a*) shows the cumulative fraction of documents that take that position. Positions on AGW as real and human-caused vary significantly across document categories ($p < 3.7 \times 10^{-13}$, Fisher's exact test, FET; see table S3, supplementary information, for details and all probability values). Figure 2 is based on all documents in figure 1; the same trend is observed when only documents with an overlapping date range are considered (section S4, supplementary information).

3.1.1. *Peer-reviewed publications*

Figures 1(*a*) and 2(*a*) show that ExxonMobil's peer-reviewed publications overwhelmingly acknowledge AGW as real and human-caused ('Acknowledge'). Of the 65% (47/72) of peer-reviewed documents that express a position, more than three-quarters hold an 'Acknowledge' position (39/47 = 83%). Table 3 provides sample quotations (see section S7, supplementary information, for substantiating quotations for all documents). ExxonMobil's listed publications include chapter 8 of the 1995 IPCC report (ExxonMobil's principal climate scientist, Haroon Kheshgi, was a contributing author), which observed a 'discernible human influence on global climate' [15, 76]. Kheshgi also co-authored the Summary for Policymakers and several chapters of the next IPCC report in 2001, which found 'there is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities' [77–80]. Of the minority of peer-reviewed documents holding a position of 'Acknowledge and Doubt' (5/47 = 11%), 'Reasonable Doubt' (2/47 = 4%), or 'Doubt' (1/47 = 2%), we judge that most of the expressed doubt constitutes normal scientific discussion about uncertainties; for example, 'the estimation of the uncertainty of this causal chain [linking human activities to changes in climate]' [81].

3.1.2. *Non-peer-reviewed documents*

The predominant stance taken in non-peer-reviewed communications is also 'Acknowledge', although compared to peer-reviewed work, it loses ground to the 'Acknowledge and Doubt' and 'Doubt' stances in roughly equal measure ($p = 0.044$, FET). Figures 1(*a*) and 2(*a*) show that, of the 74% (35/47) that take a position, 66% (23/35) 'Acknowledge', 17% (6/35) 'Acknowledge and Doubt', and 17% (6/35) 'Doubt' that AGW is real and human-caused. The more frequent expressions of doubt in non-peer-reviewed documents, compared with peer-reviewed ones, reflect the mixed nature of these documents. Some are technical, academic analyses, while others are industry-targeted speeches, reports, conference proceedings, company pamphlets, etc (see sections S2, S3, and S6, supplementary information).

3.1.3. *Internal documents*

The bulk of ExxonMobil's internal documents also take the 'Acknowledge' stance. Figures 1(*a*) and 2(*a*) show that, of the 63% (20/32) that take a position, 80% (16/20) adopt 'Acknowledge', with most of the rest expressing 'Reasonable Doubt' (3/20 = 15%). Unlike other document categories, however, our characterization of internal documents shifts dramatically if we remove filters for reasonable doubt from our analysis (see section 2). Then, 61% (11/18) take the mixed position ('Acknowledge and Doubt'), with the remainder split between 'Acknowledge' and 'Doubt' (3/18 = 17% and 4/18 = 22%, respectively).

These results are explained by the early publication period of internal documents: all but two were published before the 1990 IPCC report, and are therefore subject to our filters for reasonable doubt. These results also reflect the predominant nature of the internal documents: they acknowledge the likelihood of AGW based on internal and external research, while also highlighting uncertainties.

In 1979, for instance (table 3), an internal Exxon study concluded that:

> The most widely held theory is that:
>
> - The increase [in atmospheric CO_2] is due to fossil fuel combustion
> - Increasing CO_2 concentration will cause a warming of the earth's surface
> - The present trend of fossil fuel consumption will cause dramatic environmental effects before the year 2050.

However, the memo notes: 'It must be realized that there is great uncertainty in the existing climatic models because of a poor understanding of the atmospheric/terrestrial/oceanic CO_2 balance' [82]. Likewise, an internal briefing on the 'CO_2 "Greenhouse" Effect' from 1982 states: 'There is currently no unambiguous scientific evidence that the earth is warming. If the earth is on a warming trend, we're not likely to detect it before 1995' (see table 3). Yet, the authors say, 'Our best estimate is that doubling of the current concentration could increase average global temperature by about 1.3 °C to 3.1 °C' [83]. Several internal documents make this distinction, acknowledging that increased CO_2 would likely cause warming, while expressing (reasonable) doubt that warming was already underway and large enough to be detected.

This cautious consensus is also evident in charts in internal ExxonMobil presentations and reports. (Due to copyright restrictions prohibiting the reproduction of figures owned by ExxonMobil, we instead provide hyperlinks to third-party websites at which relevant figures can be viewed.) For example, in a 1978 presentation to the Exxon Corporation Management Committee, Exxon scientist James Black showed a graph (see https://perma.cc/PJ4N-T8SC) of projected warming 'model[ed] with the assumption that the carbon dioxide levels will double by 2050 A.D.' [95]. Another case is the 1982 Exxon primer already mentioned, which includes a graph (see https://perma.cc/PH4X-ZJBA) showing 'an estimate of the average global temperature increase' under the 'Exxon 21st Century Study-High Growth scenario' [83]. A third example is a table (see https://perma.cc/9DGQ-4TBW) presented by Exxon scientist Henry Shaw at a 1984 Exxon/Esso environmental conference, which showed that Exxon's expected 'average temperature rise' of 1.3 °C–3.1 °C was comparable to projections by leading research institutions (1.5 °C–4.5 °C) [96]. This shows that ExxonMobil scientists and managers were well informed of the state of the science at the time. But they also tended to focus on the prevailing uncertainties: Black stressed the alleged shortcomings of extant climate models before showing his results; Shaw emphasized the variable and 'unpredictable' character of some values.

We conclude that ExxonMobil's recent defense accurately characterizes the situation with respect to its peer-reviewed, non-peer-reviewed, and internal documents: 'Our researchers recognized the developing nature of climate science at the time . . . [and] mirrored global understanding' [14]. On several occasions during the early 1980s, the company's peer-reviewed and internal documents went as far as to refute 'calculations on a more limited scale by a number of climatologists' that projected much less global warming than the rest of the scientific community, including ExxonMobil [97–99]. 'In summary,' said a 1982 memo, 'the results of our research are in accord with the scientific consensus on the effect of increased atmospheric CO_2 on climate . . . and are subject to the same uncertainties' [99]. As a scientific consensus emerged in the early 1990s that AGW was underway, a 1995 'Primer on Climate Change Science' co-authored by Mobil as part of the Global Climate Coalition explicitly rejected contrarian claims that were beginning to circulate: 'Contrarian theories . . . do not offer convincing arguments against the conventional model of greenhouse gas emission-induced climate change' [100].

3.1.4. *Advertorials*

The predominant stance taken in ExxonMobil's advertorials is 'Doubt'. In essence, these public statements reflect only the 'Doubt' side of ExxonMobil's mixed internal dialogue. Figures 1(*a*) and 2(*a*) show that of the 72% (26/36) of climate change advertorials that take a position, 81% (21/26) take the position of 'Doubt', with the remainder split between 'Acknowledge' (3/26 = 11.5%) and 'Acknowledge and Doubt' (2/26 = 7.5%). A characteristic example is a 1997 Mobil advertorial (table 3), which stated: 'Let's face it: The science of climate change is too uncertain to mandate a plan of action that could plunge economies into turmoil . . . Scientists cannot predict with certainty if temperatures will increase, by how much and where changes will occur. We still don't know what role man-made greenhouse gases might play in warming the planet' [92]. Another, also from 1997, referred to a 'high degree of uncertainty,' 'debate,' and a 'knowledge gap,' and the need for further 'fact-finding' and 'additional knowledge' before UN negotiators in Kyoto could make decisions [94]. The advertorial stressed the goal 'of achieving a consensus view,' two years after the IPCC had presented one.

Our analysis is limited to advertorials in the *NYT* because those pertaining to climate change have already been compiled and are readily available. Brown *et al* report that ExxonMobil also ran advertorials in eight other major newspapers [19]. Some of these appear to have been the same or similar to those in the *NYT*. For example, in an advertorial in *The Washington Post* in 2000, ExxonMobil criticized a US National Assessment report on climate change as putting the 'political cart before a scientific horse' and being based 'on unreliable models' [101]. The advertorial was condemned by the former director of the National Assessment Coordination Office: 'To call ExxonMobil's position out of the mainstream is . . . a gross understatement' [102].

3.1.5. Contrast between advertorials and other documents

Our analysis shows that ExxonMobil's scientists and executives were, for the most part, aware and accepting of the evolving climate science from the 1970s onwards, but they painted a different picture in advertorials. The majority of ExxonMobil's peer-reviewed publications acknowledge that climate change is real and human-caused, and internal documents reflect this scientific framework. Uncertainties are mentioned or even highlighted, but usually in the context of broader scientific understandings and broadly consistent with the evolving science. In contrast, ExxonMobil's advertorials overwhelmingly focus on the uncertainties, casting doubt on the growing scientific consensus (e.g. peer-reviewed publications versus advertorials: $p = 4.1 \times 10^{-13}$, FET).

The contrast between advertorials and other documents is particularly evident in their accompanying figures. For instance, in a chapter of a 1985 US Department of Energy report co-authored by Exxon scientist Brian Flannery [103], a graph (see https://perma.cc/A5WN-LKLS) presents the results of future warming modeled for different CO_2 scenarios. 'The foregoing results, with all their caveats,' the report summarizes, 'can be construed as an approximate bracketing of the consensus of transient model predictions for the next century's CO_2 greenhouse effect. In this restricted sense, they are consistent with the EPA's estimate of a 2 °C warming from fossil fuel CO_2 and other greenhouse gases by the middle of the next century.' Their conclusion is entitled 'Consensus CO_2 Warming.' Compare this with figures from ExxonMobil advertorials in 1997 and 2000 (see https://perma.cc/39CC-JTES and https://perma.cc/74BL-KL8A, respectively), which downplay the human contribution to AGW and emphasize natural variability instead [104, 105]. Featured in an advertorial entitled 'Unsettled Science' in the *NYT* and *The Wall Street Journal*, the latter figure was taken from an article in *Science* by Lloyd Keigwin of the Woods Hole Oceanographic Institution [105–107]. Keigwin called the use of his data 'very misleading' [106]. They were a historical reconstruction of sea-surface temperatures in the Sargasso Sea and, in his words, 'not representative of the planet as a whole [as the advertorial could be taken to imply]. To jump from the western North Atlantic Ocean to the globe is something no responsible scientist would do . . . There's really no way those results bear on the question of human-induced climate warming . . . .'

The contrast across document categories is also clear when analyzed at a year-to-year scale (figure 1(*a*)). The majority of advertorials promoting doubt *follow* a decade of numerous acknowledgments in the other three document categories. Between 1977 and 1996, of all peer-reviewed, non-peer-reviewed, and internal documents that take a position, 83% fully or partly (81% and 2%, respectively) acknowledge that AGW is real and human-caused (if we remove our filter for reasonable doubt, still 83% fully or partly (43% and 40%, respectively) acknowledge this). Thereafter, in 1997 alone, we see nine advertorials promoting 'Doubt'. Significantly, throughout the late 1990s and early 2000s, ExxonMobil peer-reviewed publications and advertorials *in the same years* contradict one another (figure 1(*a*)).

3.2. Impact levels (ILs)—AGW as serious

Figure 1(*b*) is a timeline of the overall positions of all 187 documents on AGW as serious. For each category of document and for all documents that express a position, figure 2(*b*) shows the cumulative fraction of documents that take that position. Positions on AGW as serious vary significantly across document categories ($p = 0.11$, FET).

3.2.1. Peer-reviewed publications

ExxonMobil's 72 peer-reviewed publications focus almost exclusively on methods and mitigation (section S3, supplementary information). Only 10 discuss the potential impacts of AGW (figure 1(*b*)), of which 60% (6/10) take a position of 'Acknowledge', 30% (3/10) of 'Doubt', and 10% (1/10) of 'Acknowledge and Doubt' (figure 2(*b*)). Hoffert *et al* (2002), for example (see table 4), warned that unchecked greenhouse gas emissions 'could eventually produce global warming comparable in magnitude but opposite in sign to the global cooling of the last Ice Age . . . Atmospheric CO_2 stabilization targets as low as 450 ppm could be needed to forestall coral reef bleaching, thermohaline circulation shutdown, and sea level rise from disintegration of the West Antarctic Ice Sheet' [108]. A 1994 paper defined 'mean global warming of 2 °C from preindustrial time to 2100 as *Illustrative Reference Values* for climate and ecosystem protection,' two years before the EU adopted this limit [109, 110].

Table 4. Example quotations (coding units) expressing (left) acknowledgment and (right) doubt that AGW is serious. For each document category, two examples are given: the first typifies a relatively 'strong' quotation, the second a relatively 'mild' one. Substantiating quotations for all documents are provided in section S7, supplementary information.

	Acknowledge AGW is serious (IP1)		Doubt AGW is serious (IP3)	
INTERNAL	**1982** [83]	'. . . there are some potentially catastrophic events that must be considered. For example, if the Antarctic ice sheet[,] which is anchored on land should melt, then this could cause a rise in sea level on the order of 5 meters. Such a rise would cause flooding on much of the US East Coast, including the State of Florida and Washington, DC.'	**1981** [111]	'. . . it has not yet been proven that the increases in atmospheric CO_2 constitute a serious problem that requires immediate action.'
	1982 [99]	'There is unanimous agreement in the scientific community that a temperature increase of this magnitude [(3.0 ± 1.5) °C] would bring about significant changes in the earth's climate, including rainfall distribution and alterations in the biosphere.'	**1989** [113]	'We also know that the modeled projections are far from certain: potential impacts could be small and manageable or they could be profound and irreversible.'
PEER-REVIEWED	**2002** [108]	'Atmospheric CO_2 has increased from ~275 to ~370 parts per million (ppm). Unchecked, it will pass 550 ppm this century. Climate models and paleoclimate data indicate that 550 ppm, if sustained, could eventually produce global warming comparable in magnitude but opposite in sign to the global cooling of the last Ice Age . . . Atmospheric CO_2 stabilization targets as low as 450 ppm could be needed to forestall coral reef bleaching, thermohaline circulation shutdown, and sea level rise from disintegration of the West Antarctic Ice Sheet.'	**2000** [114]	'. . . science cannot yet provide reliable guidance on what, if any, levels of greenhouse gas concentrations might be judged "dangerous," . . . .'
	1994 [109]	'The rate of the climate change is thought to exert stress on ecosystems. While changes in, for example, precipitation or infrequent events such as droughts or storms may be more directly related to this stress, there remains great uncertainty in estimating these characteristics of climate.'	**1995** [86]	'Among the options that might become necessary to deploy at some time in the future, should climate change prove to be serious, are those that involve geoengineering techniques to control greenhouse gas concentrations or to limit potential impacts.'
NON-PEER-REVIEWED	**1984** [115]	'Clearly, there is vast opportunity for [global] conflict. For example, it is more than a little disconcerting the few maps showing the likely effects of global warming seem to reveal the two superpowers losing much of the rainfall, with the rest of the world seemingly benefitting.'	**1996** [116]	'Is global warming good or bad? Let's say human activity *does* contribute to warming the planet . . . warming that occurs mostly during the winter would reduce extreme cold, increase cloud cover and moderate temperature fluctuations. This sort of warming is more likely to raise soil moisture levels than to produce severe droughts . . . [T]he indications are that a warmer world would be far more benign than many imagine . . . [M]oderate warming would reduce mortality rates in the US, so a slightly warmer climate would be more healthful . . . We are faced with more questions than answers on almost every aspect of this issue, including whether possible changes could be both good and bad.'
	1980 [117]	'Findings. 1. While CO_2-induced changes in global climate may have certain beneficial effects, it is believed that the net consequences of these changes will be adverse to the stability of human and natural communities.'	**1998** [118]	'Fortunately, all indications are that climate change is a very long-term phenomenon . . . Do we need an insurance policy? Some people argue that the world needs to take out an insurance policy against the possibility of global warming just in case . . . Because of the scientific uncertainties, we don't have a clear understanding of the risks involved. The Kyoto agreement makes the cost of the policy high. No one can tell us with certainty what benefit we will gain. Thus, it doesn't seem to be a good time to buy the policy.'
ADVERTORIALS	**2002** [119]	'The risk of climate change and its potential impacts on society and the ecosystem are widely recognized. Doing nothing is neither prudent nor responsible.'	**1995** [112]	Title: 'The sky is not falling.' By-line: 'The environment . . . better than you think.' 'Good news: The end of the Earth as we know it is not imminent . . . [M]ore than 30 years have passed since the environmental movement began. They made their point. There is no longer a need for alarmists . . . [T]o those who think industry and nature cannot coexist, we say show a little respect for Mother Nature. She is one strong lady, resilient and capable of rejuvenation. The environment recovers well from both natural and man-made disasters . . . Does this justify or lessen the impact of industrial pollution? Of course not. Our point is that nature, over the millennia, has learned to cope. Mother Nature is pretty successful in taking on human nature.'
	2004 [120]	'. . . research has highlighted the risks to society and ecosystems resulting from the buildup of greenhouse gases.'	**2000** [121]	'Just as changeable as your local weather forecast, views on the climate change debate range from seeing the issue as serious or trivial, and from seeing the possible future impacts as harmful or beneficial.'

3.2.2. Non-peer-reviewed publications

Non-peer-reviewed documents offer a mix of positions (figures 1(*b*) and 2(*b*)). Among the 47% (22/47) that take a position, 45% (10/22) 'Acknowledge', 41% (9/22) 'Doubt', and 14% (3/22) 'Acknowledge and Doubt'. As with Endorsement Levels, several of the expressions of doubt in non-peer-reviewed documents reflect the industry-targeted communications included in this category (see sections S2, S3, and S6, supplementary information).

3.2.3. Internal documents

Internal documents typically acknowledge the potential for serious impacts but also highlight uncertainties. Of the 53% (17/32) of documents with a position, 35% (6/17) 'Acknowledge' and 47% (8/17) 'Acknowledge and Doubt' (figure 2(*b*)). A characteristic acknowledgement is found in a 1980 Exxon memo, which says, 'There are some particularly dramatic questions that might cause serious global problems. For example, if the Antarctic ice sheet[,] which is anchored on land, should melt, then this could cause a rise in the sea level on the order of 5 meters. Such a rise would cause flooding in much of the US East Coast including the state of Florida and Washington D.C.' [98] (see also [83]). An example of doubt is a 1981 report stating 'that it has not yet been proven that the increases in atmospheric CO_2 constitute a serious problem that requires immediate action' [111] (table 4).

3.2.4. Advertorials

In contrast, ExxonMobil advertorials overwhelmingly take the position of doubt (e.g. peer-reviewed publications versus advertorials: $p = 0.045$, FET). Of the 58% (21/36) of advertorials that take a position, 62% (13/21) express 'Doubt' (figure 2(*b*)). Most of the remainder express a mixed position (5/21 = 24%). Often, they express the opinion that concern over climate impacts is alarmist, such as a 1995 advertorial entitled 'The sky is not falling,' which asserted, 'The environment recovers well from both natural and man-made disasters' [112] (table 4).

3.3. Solvable Levels (SLs)—AGW as solvable

Positions on AGW as solvable vary significantly across document categories ($p = 3.4 \times 10^{-12}$, FET). Figure 2(*c*) shows that only 3% (2/72) of peer-reviewed papers express doubt that AGW is solvable. Internal and non-peer reviewed materials also express relatively low levels of doubt: 9% (3/32) and 19% (9/47), respectively. In contrast, 64% (23/36) of advertorials do so (e.g. peer-reviewed publications versus advertorials: $p = 2.8 \times 10^{-12}$, FET).

The 'Doubt' arguments are relatively consistent across document categories (table 5), typically suggesting that climate mitigation strategies will either fail or create bigger problems. The arguments point to one or more of: limitations of renewable energy and other technologies such as carbon capture and storage; an (alleged) dichotomy between climate mitigation and poverty reduction; and potential adverse economic impacts of mitigation. However, there is a discernible difference in the prominence and emphasis that these concerns are given in advertorials compared to other documents. In particular, in advertorials, the remedies for AGW are presented as a grave threat, whereas climate change itself is not. For example, advertorials claimed that the Kyoto Protocol to the United Nations Framework Convention on Climate Change would be 'financially crippling' and 'economy-wrecking' [122, 123]. It, or strategies like it, would lead to 'severe dislocations throughout the world economy,' an 'unprecedented transfer of wealth,' and be a 'blow to US prosperity' [124–126]. One 1997 advertorial warns: 'Flexibility will be constrained. Carpooling in; sport utility vehicles out. High fuel and electric bills. Factory closures. Job displacement. And could businesses and consumers cut their energy consumption by 30 percent without some form of tax or carbon rationing? Probably not' [92]. A 2000 advertorial contrasts the unpredictability of AGW against the asserted 'certainty that climate change policies, unless properly formulated, will restrict life itself' [121] (table 5).

3.4. Stranded fossil fuel assets

The number of times the concept of stranded fossil fuel assets is mentioned varies significantly across document categories ($p = 0.0042$, FET). In total, 24 of the analyzed documents allude to the concept of stranded fossil fuel assets: seven peer-reviewed publications, ten non-peer-reviewed publications, and seven internal documents. No advertorials address the issue.

Stranded assets are discussed in two ways (see table 6 and section S5, supplementary information): (i) Implicit, qualitative connections between fossil fuel reserves/resources/use and either greenhouse gas limits or possible climate mitigation policies; and (ii) explicit quantifications of 'cumulative emissions' and/or 'carbon budgets' consistent with greenhouse gas stabilization.

3.4.1. Qualitative connections

These discussions imply limitations on fossil fuel use because of greenhouse gas limits or climate mitigation. 'Mitigation of the "greenhouse effect",' says the 1982 internal Exxon primer, 'would require major reductions in fossil fuel combustion' [83]. Likewise, an internal 1979 Exxon study found that 'should it be deemed necessary to maintain atmospheric CO_2 levels to prevent significant climatic changes . . . coal and possibly other fossil fuel resources could not be utilized to an appreciable extent' [82].

3.4.2. Quantitative carbon budgets

These discussions introduce, with varying degrees of detail, ideas of 'cumulative fossil fuel use,' 'cumulative

Table 5. Example quotations (coding units) expressing doubt that AGW is solvable. For each document category, two examples are given: the first typifies a relatively 'strong' quotation, the second a relatively 'mild' one. Substantiating quotations for all documents are provided in section S7, supplementary information.

	Doubt AGW is solvable (SP1)	
INTERNAL	**1989** [131]	'Some key perceptions/misconceptions . . . Nuclear and/or renewable energy resources can solve the problem.'
	1982 [83]	'Making significant changes in energy consumption patterns now to deal with this potential problem amid all the scientific uncertainties would be premature in view of the severe impact such moves could have on the world's economies and societies.'
PEER-REVIEWED	**2002** [108]	'Even as evidence for global warming accumulates, the dependence of civilization on the oxidation of coal, oil, and gas for energy makes an appropriate response difficult.'
	2001 [132]	'Even for the higher stabilization levels considered, the developing world would not be able to use fossil fuels for their development in the manner that the developed world has used them.'
NON-PEER-REVIEWED	**1998** [118]	'To get to the [Kyoto] target, we would have to stop all driving in the US or close all electric power plants or shut down every industry. Obviously, these are not realistic options . . . meeting the Kyoto target would clearly have a huge economic impact.' 'Independent economists project that to get the targeted reductions in fossil-fuel use, price increases like these would be required: 40 percent for gasoline, 50 percent for home heating oil, 25 percent for electricity and 50 percent for natural gas. These and other price hikes could cost the average American family of four about $2,700 a year. At least some developed countries would probably have to impose significantly higher fossil fuel taxes, rationing or both.'
	2005 [133]	'[E]missions will continue to grow to meet the demands of society for prosperity and to meet basic needs . . . Countries like India, China and Indonesia are going to rely on domestic coal to meet growing needs . . . and their emissions are going to grow rapidly . . . [F]ossil fuels will remain the dominant source of energy supply over this period and beyond. Even with rapid year-to-year growth, intermittent renewable energy from wind and solar will remain a small contributor to global energy needs.'
ADVERTORIALS	**1997** [92]	'What is not moderate is the call [by the US government and other countries in the run up to UN Kyoto negotiations] to lower emissions to 1990 levels. A cutback of that size would inflict considerable economic pain . . . Committing to binding targets and timetables now will alter today's lifestyles and tomorrow's living standards. Flexibility will be constrained. Carpooling in; sport utility vehicles out. High fuel and electric bills. Factory closures. Job displacement. And could businesses and consumers cut their energy consumption by 30 percent without some form of tax or carbon rationing? Probably not.'
	2002 [134]	'On an overall basis, many of today's suggested alternative energy approaches are not as energy efficient, environmentally beneficial or economic as competing fossil fuels. They are often sustained only through special advantages and government subsidies. This is not a desirable basis for public policy or the provision of energy.'

CO_2 emissions,' and 'carbon budgets . . . for CO_2 stabilization' and/or climate mitigation [81, 127]. Five of these ExxonMobil studies–one internal, three peer-reviewed, and one non-peer-reviewed–include data (see, for example, https://perma.cc/EJ5A-EAZ7) that indicate 2015–2100 CO_2 budgets consistent with limiting warming to 2 °C and/or stabilizing CO_2 concentrations below 550 ppm in the range of 251–716 GtC [81, 83, 127–129]. These budgets are within a factor of two of contemporary estimates of roughly 442–651 GtC [130] (see caption, table 6).

4. Discussion

The question we have addressed in this study is not whether ExxonMobil '*suppressed* climate change research,' '*withheld* it,' or 'sought to *hide*' it, which is how ExxonMobil has glossed the allegations against it [11, 12, 135]. This is also how the allegations have occasionally been presented in the press [136]. Our assessment of ExxonMobil's peer-reviewed publications and the role of its scientists supports the conclusion that the company did not 'suppress' climate science—indeed, it contributed to it.

However, on the question of whether ExxonMobil *misled* non-scientific audiences about climate science, our analysis supports the conclusion that it did. This conclusion is based on three factors: discrepancies in AGW communications between document categories; imbalance in impact of different document categories; and factual mispresentations in some advertorials.

First, we have shown that there is a discrepancy between what different document categories say, and particularly what they emphasize, about AGW as real, human-caused, serious, and solvable. This discrepancy grows with the public accessibility of documents, and is greatest between advertorials and the other documents.

Second, in public, ExxonMobil contributed quietly to the science and loudly to raising doubts about it. ExxonMobil's peer-reviewed and non-peer-reviewed publications have been cited an average (median (mean)) of 21(60) and 2(9) times, respectively,

Table 6. Example quotations (coding units) alluding to stranded fossil fuel assets. For each document category except advertorials, which do not discuss stranded assets, two examples are given: the first typifies an implicit, qualitative connection between fossil fuel reserves/resources/use and either greenhouse gas limits or possible climate mitigation policies; the second is characteristic of an explicit quantification of 'cumulative emissions' and/or 'carbon budgets' consistent with greenhouse gas stabilization. These quantitative examples are comparable to contemporary estimates; specifically, the IPCC indicates a carbon budget of 442 GtC (or 651 GtC) between 2015 and 2100 for limiting CO_2-induced AGW to below 2 °C relative to 1861–1880 with a probability greater than 66% (or 50%) [130]. Quotations from all 24 documents that refer to stranded assets are provided in section S5, supplementary information.

INTERNAL	**1979** [82]	'The major conclusion from this report is that, should it be deemed necessary to maintain atmospheric CO_2 levels to prevent significant climatic changes, dramatic changes in patterns of energy use would be required. World fossil fuel resources other than oil and gas could never be used to an appreciable extent . . . Removal of CO_2 from flue gases does not appear practical due to economics and lack of reasonable disposal methods. If it becomes necessary to limit future CO_2 emissions without practical removal/disposal methods, coal and possibly other fossil fuel resources could not be utilized to an appreciable extent.'
	1982 [83]	'Table 4 presents the estimated total quantities of CO_2 emitted to the environment as GtC, the growth of CO_2 in the atmosphere in ppm (v), and average global temperature increase in °C over 1979 as the base year.' (Note that temperature anomalies appear to be calculated based on equilibrium climate sensitivity.) It also shows 'cumulative' CO_2 'emitted, GtC' as a function of time. Given roughly 0.3 °C warming by 1979 relative to 1861–1880, we read off (by interpolation) the cumulative emissions in table 4 (in [83]) corresponding to a further 1.7 °C warming, yielding a carbon budget for <2 °C of 624 GtC. Adjusting for emissions between 1979 and 2015, we obtain a carbon budget for <2 °C of 373 GtC between 2015 and 2100, which is comparable with contemporary estimates of roughly 442–651 GtC (see caption).
PEER-REVIEWED	**1985** [103]	'More complex scenarios . . . can be envisioned in which fossil fuel use is rapidly phased out by taxing or other policies, or in which fossil fuel use is decreased by societal feedbacks based on observations of global warming.'
	2003 [81]	Figure 9 (in [81]) shows that temperature anomalies of less than or equal to 2 °C (note that these appear to be calculated based on equilibrium climate sensitivity) are consistent with CO_2 stabilization at concentrations of 450 ppm or 550 ppm. Table 3 (in [81]) explicitly quantifies fossil fuel 'carbon budgets . . . for CO_2 stabilization' at these concentrations, with reference values of 485 GtC (450 ppm scenario) and 820 GtC (550 ppm scenario) between 2000 and 2099. Adjusting for emissions between 2000 and 2015, this yields carbon budgets for <2 °C of 357 GtC and 692 GtC, respectively, between 2015 and 2100, which are comparable with contemporary estimates of roughly 442–651 GtC (see caption).
NON-PEER-REVIEWED	**2005** [133]	'Without obligations by developing countries, stabilizing at 550 ppm would require a phase out in the use of fossil fuels by the middle of the century in the annex 1 countries. That's a huge step.'
	2003 [129]	Author introduces the idea of 'cumulative fossil fuel use' and 'cumulative CO_2 emissions.' Figure 3 (in [129]) shows that a '550 ppm stabilization trajectory' requires a rapid decline in annual CO_2 emissions, with cumulative emissions between 2015 and 2100 (integrating area beneath curve) of roughly 490 GtC. This is comparable to contemporary carbon budget estimates for <2 °C of roughly 442–651 GtC (see caption). Author also notes that 'cumulative fossil fuel use of 2000 GtC might not exhaust global fossil fuel reserves, but limits to fossil fuel use might be driven by better alternatives that emerge over the next century.' He refers to 'notional scenarios for a fossil fuel era of limited duration.'

suggesting an average readership of tens to hundreds[3]. Most texts are highly technical, intellectually inaccessible for laypersons, and of little interest to the general public or policymakers. Most scientific journals and conference proceedings are only circulated to academic libraries and require a paid subscription, making them physically inaccessible for the general public, too. Obtaining academic documents for this study, for example, required access to libraries at Harvard University and Massachusetts Institute of Technology and international interlibrary loans. By contrast, Mobil/ExxonMobil bought AGW advertorials in the *NYT* specifically to allow 'the public to know where we stand' [137]. Readerships were in the millions [29]. The company took out an advertorial every Thursday between 1972 and 2001 [29]. They paid a discounted price of roughly $31 000 (2016 USD) per advertorial and bought one-quarter of all advertorials on the Op-Ed page, 'towering over the other sponsors' according to reviews of Mobil's advertorials by Brown, Waltzer, and Waltzer [19, 29]. 'After [experimentally] examining the effects of an actual ExxonMobil advertorial that appeared on the pages of *The New York Times*,' Cooper and Nownes observed 'that advertorials substantially affect levels of individual issue salience . . . .' [20]

Third, ExxonMobil's advertorials included several instances of explicit factual misrepresentation. As discussed in section 3.1.5, an ExxonMobil advertorial in 2000 directly contradicted the IPCC and presented 'very misleading' data, according to the scientist who produced the data [105, 106]. Another advertorial, in 1996, claimed that 'greenhouse-gas emissions, which have a warming effect, are offset by another

[3] Citation counts were sourced predominantly from Google Scholar and, when occasionally not available there, from Web of Science. IPCC reports and a handful of non-applicable documents, such as drafts, were excluded.

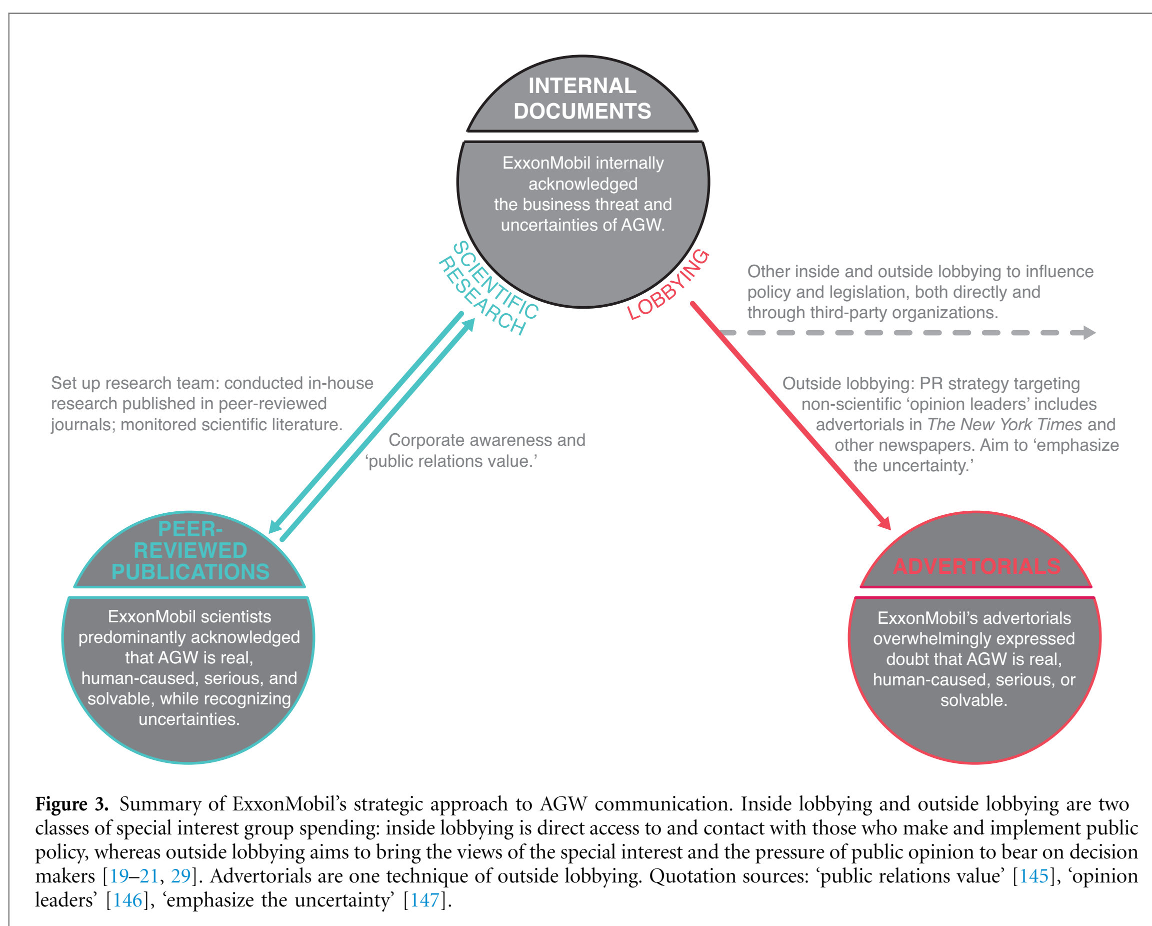

Figure 3. Summary of ExxonMobil's strategic approach to AGW communication. Inside lobbying and outside lobbying are two classes of special interest group spending: inside lobbying is direct access to and contact with those who make and implement public policy, whereas outside lobbying aims to bring the views of the special interest and the pressure of public opinion to bear on decision makers [19–21, 29]. Advertorials are one technique of outside lobbying. Quotation sources: 'public relations value' [145], 'opinion leaders' [146], 'emphasize the uncertainty' [147].

combustion product–particulates–which leads to cooling' [138]. In 1985, ExxonMobil scientists had reported being 'not very convinc[ed]' by the argument that 'aerosol particulates . . . compensat[e] for, and may even overwhelm, the fossil-fuel CO_2 greenhouse warming' [103]. By 1995, the IPCC had rejected it [71].

We acknowledge that textual analysis is inherently subjective: words have meaning in context. Particular coding assignments may therefore be debatable, depending on how the meaning and context of individual quotations and figures are interpreted. However, the intercoder reliability and agreement of our content analyses are consistently high (section S1.7, supplementary information). While one might disagree about the interpretation of specific words, the overall trends between document categories are clear (table S3, supplementary information).

In figure 3, we summarize ExxonMobil's strategic approach to AGW research and communication. Internal documents show that by the early 1980s, ExxonMobil scientists and managers were sufficiently informed about climate science and its prevailing uncertainties to identify AGW as a potential threat to its business interests. This awareness apparently came from a combination of prior research and expert advice. For example, in 1979 and 1980, university researcher Andrew Callegari co-authored two peer-reviewed articles acknowledging that 'the climatic implications of fossil fuel carbon dioxide emissions have been recognized for some time' [139, 140]. The authors articulated the 'climatically huge' temperature increases and ecological impacts that would result 'if a significant fraction of the fossil fuel reserve is burned' (section S5, supplementary information). In 1980, Callegari joined Exxon, and the next year took over its CO_2 research efforts [141]. His papers were frequently cited in company publications [97, 142–144].

Around this time, ExxonMobil set up two parallel initiatives: climate science research, and a complimentary public relations campaign (left and right branches of figure 3). According to a 1978 'Request for a credible scientific team,' these initiatives targeted four audiences: the scientific community, government, Exxon management, and the general public and policymakers [145].

4.1. Scientific community

From approximately 1979 to 1982, the Exxon Research and Engineering (ER&E) Company pursued three major AGW research projects. ExxonMobil's 2015 statement that two of the projects 'had nothing to do with CO_2 emissions' [148] is contradicted by internal documents [111, 149, 150]. In the early 1980s, these major research initiatives were discontinued amidst budget cuts [111, 151]. In 1984, ER&E characterized its approaches: 'Establish a scientific presence through research program in climate modeling; selective support of outside activities; maintain awareness of new scientific developments' [152]. In 1986, scientist Haroon Kheshgi joined ER&E [153], and was

henceforth ExxonMobil's principal (and only consistent) academic author, co-authoring 72% (52/72) of all analyzed peer-reviewed work (79% since his hiring). Indeed, the metadata title of the 'Exxon Mobil Contributed Publications' file is 'Haroon's CV' [15].

4.2. Government

As a 1980 'CO_2 Greenhouse Communications Plan' explained, 'The research is . . . significant to Exxon since future public decisions aimed at controlling the buildup of atmospheric CO_2 could impose limits on fossil fuel combustion' [146]. The scientific research, a 1982 letter described, helped 'to provide Exxon with the credentials required to speak with authority in this area' [99]. ExxonMobil appealed to its research credentials in communications with government officials [84].

4.3. Exxon management

A 1981 'Review of Exxon climate research' observes that 'projects underway and planned on CO_2 . . . are providing an opportunity for us to develop a detailed understanding of the total Federal atmospheric CO_2 program which the Corporation needs for its own planning . . .' [111].

4.4. Public and policymakers

The company's climate science research offered 'great public relations value,' observed a 1978 memo [145]. In 1980, with input from outside public relations counsel, Exxon developed a 'CO_2 Greenhouse Communications Plan,' including advertorials, to target 'opinion leaders who are not scientists' [146, 147]. By 1988–9, this plan explicitly aimed to 'extend the science' and 'emphasize the uncertainty in scientific conclusions regarding the potential enhanced Greenhouse effect' [131, 147]. That year, 1989, they ran their first AGW advertorial. ExxonMobil's interest in influencing the non-scientific public and policymakers helps explain our key observation: the discrepancy between internal and academic documents versus advertorials concerning AGW as real, human-caused, serious, and solvable.

5. Conclusion

Available documents show a discrepancy between what ExxonMobil's scientists and executives discussed about climate change privately and in academic circles and what it presented to the general public. The company's peer-reviewed, non-peer-reviewed, and internal communications consistently tracked evolving climate science: broadly acknowledging that AGW is real, human-caused, serious, and solvable, while identifying reasonable uncertainties that most climate scientists readily acknowledged at that time. In contrast, ExxonMobil's advertorials in the *NYT* overwhelmingly emphasized only the uncertainties, promoting a narrative inconsistent with the views of most climate scientists, including ExxonMobil's own. This is characteristic of what Freudenberg *et al* term the *Scientific Certainty Argumentation Method* (SCAM)—a tactic for undermining public understanding of scientific knowledge [57, 58]. Likewise, the company's peer-reviewed, non-peer-reviewed, and internal documents acknowledge the risks of stranded assets, whereas their advertorials do not. In light of these findings, we judge that ExxonMobil's AGW communications were misleading; we are not in a position to judge whether they violated any laws.

Acknowledgments

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Annex 14i

CLIMATEFILES

Hard to Find Documents All in One Place

SEARCH

New Shell Oil Documents: “Dirty Pearls” Investigation 2023-24

A new collection on ClimateFiles of old Shell documents around climate change is published below.

These documents were uncovered during five years of research by Vatan Hüzeir of Changerism, while a PhD candidate at Erasmus University Rotterdam, as part of his investigation entitled, *Dirty pearls:*

exposing Shell's hidden legacy of climate change accountability, 1970-1990.

New reporting with additional documents published on January 18, 2024 by DeSmog

New Shell Files Could Aid Climate Cases, Attorneys Say

Latest documents unearthed by Dutch climate activist seen as "valuable sources" for litigators.

By **Matthew Green** and **Merel de Buck** on Jan 17, 2024 @ 21:01 PST
11 min read

Credit: Sabrina Bedford.

The first stories on this material were published on April 1, 2023 by DeSmog:

Lost Decade: How Shell Downplayed Early Warnings Over Climate Change

Newly discovered documents from the 1970s and early '80s show that Shell knew more about the "greenhouse effect" than it let on in public.

By **Matthew Green** on Mar 31, 2023 @ 21:00 PDT
21 min read

and by Follow The Money in the Netherlands:

FOLLOW THE MONEY

Shell already knew about climate change in the 1970s (and still promoted the use of coal)

BIRTE SCHOHAUS

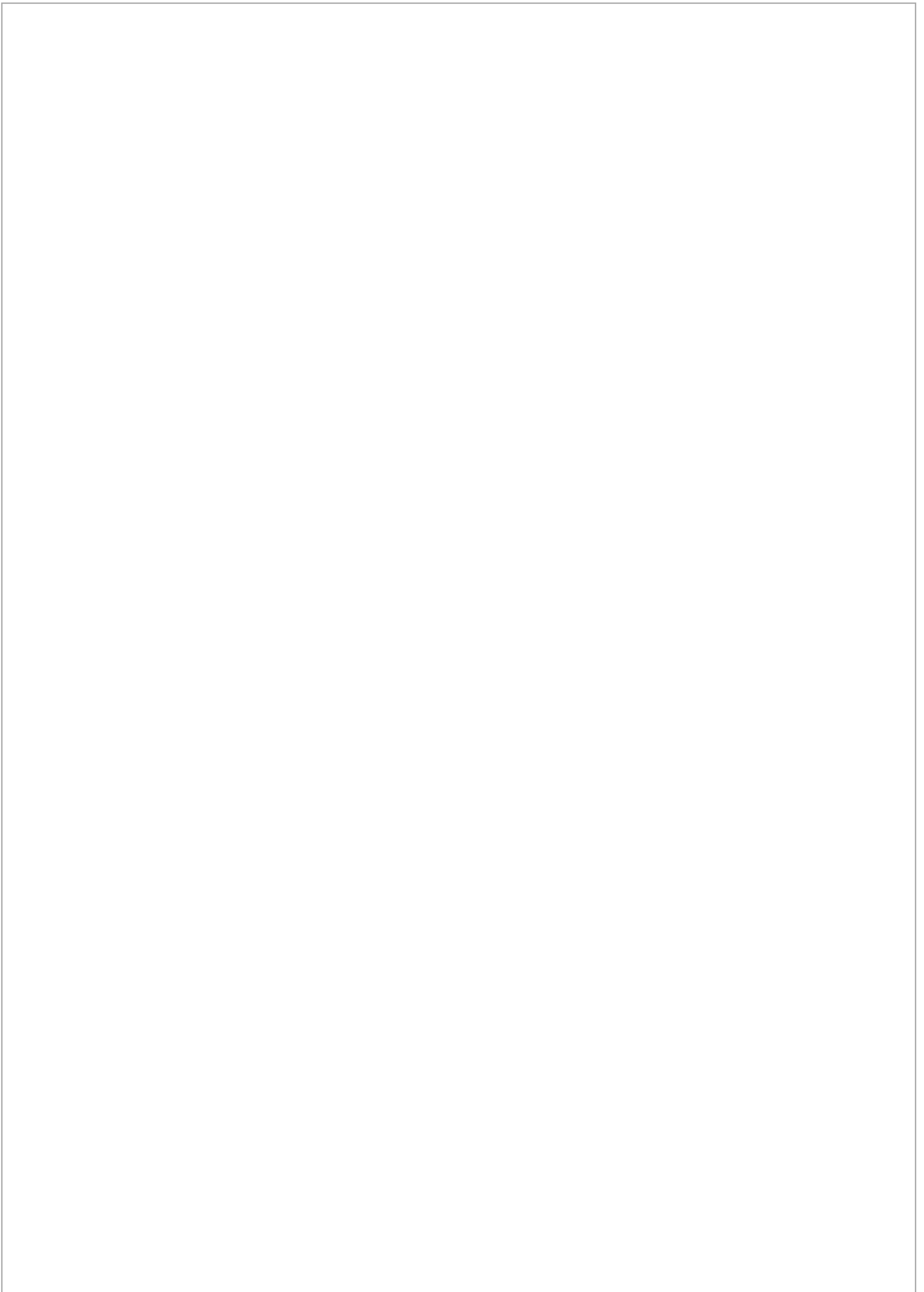
MEREL DE BUCK

Videos unearthed in the Dirty Pearls investigation

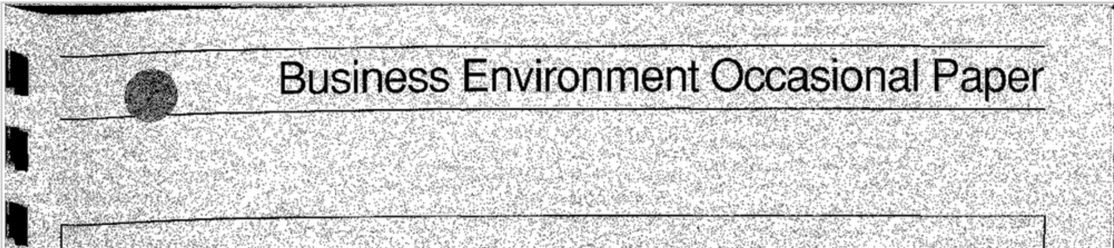
Shell TV Advertising examples 1973-2007 era

1981 Shell documentary: "Time For Energy"

Documents from the Dirty Pearls Investigation



Page 1 of 1992 Internal Shell Group Planning report Potential Augmented Greenhouse Effect and Depletion of the Ozone Layer



HD 9560·1·R6

Air pollution:

"Pax Christi and Amnesty International wish to take this opportunity to again express their appreciation of the pioneering role that Shell is fulfilling in recognising that

Shell note on leaving the Global Climate Coalition (p. 41)

Lobbying and industry associations
Shell companies belong to many industry associations, some of which take a view on climate change and lobby regulators. One such lobby group is the Global Climate Coalition (GCC) of the USA.

Until recently Shell Oil in the USA had been a member of the coalition. Following Kyoto it became clear that the respective views of the Shell companies and the GCC were too far

The whole collection can be searched on DocumentCloud below:

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shell oil

Annex 14ii

[Snippets of confidential Shell UK November 1989 Scenarios - DocumentCloud]

Shell UK

November 1989

UK SCENARIOS 1989

HAS THE BIGGEST CHALLENGE BEGUN?

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Snippets of confidential Shell UK November 1989 Scenarios - DocumentCloud

5 SUSTAINABLE WORLD

THE GLOBAL LINK

The main driver in this scenario is environmental concern propelled by a growing awareness that continued economic growth along traditional lines is not sustainable.

The key lies in:

- further international co-operation in reducing global financial imbalances,
- international co-operation on environmental issues,
- the promotion of ecologically sound economic growth in developing countries via the injection of substantial resources.

A pre-requisite is a successful resolution of the current imbalances in the economic system. This is achieved via a debt reduction programme initiated by the OECD and linked to the Developing Countries.

A resilient global economy allows greater weight to be given to longer term considerations, increasingly dominated by environmental issues.

Green issues become an integral part of the political agenda. They lead to OECD countries adopting environmental programmes in response to public/media pressures. The policy response includes much tighter targets for CO_2 emissions and CFC usage, and the introduction of carbon taxes and elimination of many CFCs. It is matched by strong consumer demand for environmentally clean products.

Action in the OECD is only the beginning. There is recognition of the potential environmental damage by rapidly growing LDCs and that global problems require global solutions. Developing Countries are persuaded to participate, particularly with regard to deforestation and energy efficiency, through a set of carrots and sticks - eg targeted aid, and debt write-downs to those willing to cooperate on environmentally sound policies.

Tougher action is taken against emissions and spillages, and there is an expansion of "no-go" areas where technical failure or human error may cause large-scale ecological damage.

As these features take hold, the source of world economic growth shifts from consumption to investment as more resources are devoted to care of the environment.

The emphasis in technological development moves towards alternative sources of energy and the reduction of consumption of hydrocarbons.

Snippets of confidential Shell UK November 1989 Scenarios - DocumentCloud

ENVIRONMENT

Sustainable World recognises that it is essential to everyone's interest to protect the world's fragile life-support and eco-systems. Nations like the UK, and groups such as the EC, introduce their own legislation both to lead the world community and to play their part. The numbers involved, and the differing capabilities of the disparate nations to act, make international legislation more cumbersome. Even here though, widespread belief in the importance of the environment makes progress possible. The logic has been encapsulated in Chart 6.

Environmental pressure groups will be powerful. Their interplay with government will often lead to legislation (industry lobbies having little influence); but legislation may be superfluous if consumer behaviour has already rendered stringent environmental standards essential.

The environmental concerns of GM will be felt in SW, but will be wider and deeper. The three main areas of health, environmental pollution and depletion will be addressed - this last encompassing not just energy, but other resources and aspects of the countryside. In particular, global issues will be grasped, and progress will be rapid when issues capture the imagination, are simple and/or have simple solutions. There will be national and international legislation, effective consumer responses and - in the interim particularly - environmental litigation. Much of this litigation will be vexatious - specialist lawyers and environmental lobbyists creating opportunities to further their interests and views. Heavy costs are incurred by energy and chemical companies.

The consumer response, an essential difference from GM, will be based on the intense interest of media and public. The resulting mixture of profound concerns and hasty crusades will lead to intense and unpredictable pressures on business.

Where there can be real consumer choice it will be a dominant force, especially where interest is heightened by obvious environmental impact, sensitisation by frequent purchases and by high peer visibility. Volatile consumer behaviour or even action by others (such as the dockers who handled imported PCBs) will make some unpredicted constraints appear capricious; but alongside numerous emotional responses there will be mainstream, considered concerns.

Environmental constraints will be felt throughout the business. Concerns about global warming and depletion will depress production of fossil fuels, their market share declining as renewables are actively promoted. High energy prices will enhance the savings made due to legislation and consumer choice, facilitated by innovation.

One mechanism will be carbon taxes, which will constrain gas least; but high standards will be set and enforced to minimise leakages, for which high energy costs would be an inadequate incentive.

Concerns in SW will extend to the appearance of the countryside. This will challenge large investments (such as refineries and power stations) and infrastructural developments such as power transmission and transport systems. Even the appearance of service stations may be challenged in a world where the ethos is to be at one with the environment.

Snippets of confidential Shell UK November 1989 Scenarios - DocumentCloud

Environmental aspects of the scenarios are compared in the box below.

Environmental Aspects Of Scenarios

GLOBAL MERCANTILISM	ASPECT	SUSTAINABLE WORLD
Moderate	**Level of Concern**	Intense
EC-wide issues	**Geographical scope**	Local, national & global issues
Enviro. quality & trade equality	**Objectives**	A sustainable world
Legislation	**Mechanism**	Legislation plus consumer interest
European Commission	**Agents**	UNEP, nat. govts, media & public
High	**Predictability**	Variable
Diffs. inhibit inter-bloc trade	**Market scope**	Worldwide
EC-wide; prods must be cost-effective	**Market type**	Worldwide for enviro. technols.
End-of pipe acceptable	**Solutions**	Minimisation at source preferred
Significant; a consideration	**Cost**	Greater, but an afterthought
Meeting standards	**Business requirements**	Image & standards

CHEMICALS

The relative economic stability of SW damps cyclical fluctuations. This climate fosters R&D, aiding innovation necessary to meet environmental standards and thus staving off encroaching maturity. Growth in Europe is thus greater than under GM, and estimated by the Sector as a fairly constant 3% pa to 2010.

In the SW scenario MNCs can site their operations where they are most efficient, thus promoting growth. Shell's R&D and manufacturing - concentrated predominantly in Europe, and with much of that in the UK - remains a sound arrangement. Increasing unification of markets favours locations where product transport costs are lowest.

The preoccupation with environmental concerns leads to qualitatively different requirements. There is little demand for high-performance engineering composites, but growth in structural materials improves energy conservation and transport efficiency. The focus for lubricants is efficiency rather than performance. Legislative and market pressures limit the use of solvents for cleaning and in paints. Phosphates in detergents are considered archaic. Less fruit is sprayed merely for cosmetic reasons, and insecticides which impact on pest predators and bird populations come under increasing pressure.

A major focus of the chemicals industry is waste treatment, and recycling of plastics becomes particularly important. The practicability of recycling products or their materials is a key factor in competition between polymers and metals or ceramics, and in choices between polymers. Ease of separation, to permit recycling, is considered at the design stage and there is a more limited range of polymers and their composites to facilitate recycling.

Production costs are relatively high in SW, but these are accepted when products and processes are perceived to be beneficial. The major reasons for the high costs will be substantial feedstock and energy costs, a business

Annex 15

The forgotten oil ads that told us climate change was nothing

This article is more than 2 years old

Since the 1980s, fossil fuel firms have run ads touting climate denial messages – many of which they'd now like us to forget. Here's our visual guide

by Geoffrey Supran and Naomi Oreskes

Supported by

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Thu 18 Nov 2021 11.00 CET
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Why is meaningful action to avert the climate crisis proving so difficult? It is, at least in part, because of ads.

The fossil fuel industry has perpetrated a multi-decade, multibillion dollar disinformation, propaganda and lobbying campaign to delay climate action by confusing the public and policymakers about the climate crisis and its solutions. This has involved a remarkable array of advertisements – with headlines ranging from "Lies they tell our children" to "Oil pumps life" – seeking to convince the public that the climate crisis is not real, not human-made, not serious and not solvable. The campaign continues to this day.

As recently as last month, six big oil CEOs were summoned to US Congress to answer for the industry's history of discrediting climate science – yet they lied under oath about it. In other words, the fossil fuel industry is now misleading the public about its history of misleading the public.

We are experts in the history of climate disinformation, and we want to set the record straight. So here, in black and white (and color), is a selection of big oil's thousands of deceptive climate ads from 1984 to 2021. This isn't an exhaustive analysis, of which we have published several, but a brief, illustrated history – like the "sizzle reels" that creatives use to highlight their best work – of the 30-plus year evolution of fossil fuel industry propaganda. This is big oil's PR sizzle reel.

Early days: learning to spin

Humble Oil (now ExxonMobil) was not self-conscious about the potential environmental impacts of its products in this 1962 advertisement touting "Each day Humble supplies enough energy to melt 7 million tons of glacier!"

The forgotten oil ads that told us climate change was nothing | Environment | The Guardian

View image in fullscreen

- Life Magazine, 1962

The truth behind the ad: Three years earlier, in 1959, America's oil bosses had been warned that burning fossil fuels could lead to global heating "sufficient to melt the icecap and submerge New York".
Their knowledge only grew. A 1979 internal Exxon study warned of "dramatic environmental effects" before 2050. "By the late 1970s", a former Exxon scientist recently recalled, "global warming was no longer speculative".'

'Reposition global warming as theory (not fact)'

In 1991, Informed Citizens for the Environment, a front group of coal and utility companies announced that "Doomsday is cancelled" and asked, "Who told you the earth was warming … Chicken Little?" They complained about "weak" evidence, "non-existent" proof, inaccurate climate models and asserted that the physics was "open to debate".

[The forgotten oil ads that told us climate change was nothing | Environment | The Guardian]

Who told you the earth was warming... Chicken Little?

Chicken Little's hysteria about the sky falling was based on a fact that got blown out of proportion.

It's the same with global warming. There's no hard evidence it is occurring. In fact, evidence the Earth is warming is weak. Proof that carbon dioxide has been the primary cause is non-existent. Climate models cannot accurately predict the future global change. And the underlying physics of climatic change are still wide open to debate.

If you care about the earth, but don't want your imagination to run away with you, make sure you get the facts.

Write Informed Citizens for the Environment, P.O. Box [illegible], Grand Forks, North Dakota [illegible], or call toll-free [illegible]. We'll send today's

[View image in fullscreen]

The forgotten oil ads that told us climate change was nothing | Environment | The Guardian

View image in fullscreen

- Both ads from the Informed Citizens for the Environment, 1991

The truth behind the ads: Instead of warning the public about global heating or taking action, fossil fuel companies stayed silent as long as they could. In the late 1980s, however, the world woke up to the climate crisis, marking what Exxon called a "critical event". The fossil fuel industry's PR apparatus swung into action, implementing a strategy straight out of big tobacco's playbook: to weaponize science against itself.

A 1991 memo by Informed Citizens for the Environment made that strategy explicit: "Reposition global warming as theory (not fact)."

'Emphasize the uncertainty'

Mobil and ExxonMobil ran one of the most comprehensive climate denial campaigns of all time, with a foray in the 1980s, a blitz in the 1990s and continued messaging through the late 2000s. Their climate "advertorials" –

advertisements disguised as editorials – appeared in the op-ed page of the New York Times and other newspapers and were part of what scholars have called “the longest, regular (weekly) use of media to influence public and elite opinion in contemporary America”.

Lies they tell our children

"I don't have a future."

With tears streaming down her face, a 13-year-old girl made this bleak assessment to her father. To back up her pessimism, she had brought home from school a mimeographed sheet listing the horrors that awaited her generation in the next 25 years: Worldwide famine, overpopulation, air pollution so bad that everyone would wear a gas mask, befouled rivers and streams that would mandate cleansing tablets in drinking water... a greenhouse effect that would melt the polar ice caps and devastate U.S. coastal cities... a cancer epidemic brought on by damage to the ozone layer.

Moved by the girl's misery, her father, Herbert I. London of the Hudson Institute and New York University, wrote a book, *Why Are They Lying to Our Children?* The book documents how some of the myths of the 1960s and 1970s—and some much older than that—are being perpetuated and taught as gospel truth in some of our schools. And the book raises a question in our minds: Will the next generation have any better understanding of science and technology—both their merits and their problems—than our own?

Professor London's book is not a plea for unbridled technology. But it is a plea for balance. And school textbooks, he believes, are notoriously unbalanced. In dealing with environmental questions, for example, no textbook the professor could find made any mention of the following facts:

- Total automobile emissions of hydrocarbons, carbon monoxide, and nitrogen oxide in the U.S. are less than half what they were from 1957 to 1967.
- The amount of unhealthy sulfur dioxide in the air has been steadily declining since 1970.
- The bacteria level in the Hudson River declined by more than 30 percent between 1966 and 1980.

Textbooks, Professor London finds, mythologize nature as eternally benign until disturbed by man. It's a rare schoolbook that talks about volcanoes belching radiation into the air, floods that overwhelm river towns, and tornadoes that lift people into oblivion. Moreover, textbooks hardly mention the promise of a bright future already on the horizon—when average life expectancy may approach 90 years, when products derived from recombinant DNA research will eliminate most viral diseases, when we will enjoy greater leisure, and materials—especially plastics—will be better, stronger, and safer.

Professor London's conclusion—with which we heartily agree—is that we should help our children think for themselves and reach balanced conclusions. Let's look at their textbooks, not to censor them but to raise questions. Let's give them different points of view and help discuss them. That way we can educate a new generation of citizens who aren't scared by science, and who won't be swayed by old mythologies.

Our youngsters do have a future. We, and the schools, should help them look forward to it with hope, even as they prepare to deal with its problems.

Mobil

© 1984 Mobil Corporation

View image in fullscreen

The forgotten oil ads that told us climate change was nothing | Environment | The Guardian

Apocalypse no

For the first half of 1992, America was inundated by the media with dire predictions of global warming catastrophes, all of which seemed to be aimed at heating up the rhetoric from the Earth Summit in Rio de Janeiro last June.

Unfortunately, the media hype proclaiming that the sky was falling did not properly portray the consensus of the scientific community. After the Earth Summit, there was a noticeable lack of evidence of the sky actually falling and subsequent colder than normal temperatures across the country cooled the warming hysteria as well.

Everybody, of course, remembers the Earth Summit and the tons of paper used up in reporting on it—paper now buried in landfills around the world. But few people ever heard of a major document issued at the same time and called the "Heidelberg Appeal." The reason? It just didn't make "news."

Perhaps that is because the Appeal urged Summit attendees to avoid making important environmental decisions based on "pseudo-scientific arguments or false and non-relevant data."

The Heidelberg Appeal was issued initially by some 264 scientists from around the world, including 52 Nobel Prize winners. Today, the Appeal carries the signatures of more than 2,300 scientists—65 of them Nobel Prize winners—from 79 countries. If nothing else, its message is illustrative of what's wrong with so much of the global warming rhetoric. The lack of solid scientific data.

Scientists can agree on certain facts pertaining to global warming. First, the greenhouse effect is a natural phenomenon; it accounts for the moderate temperature that makes our planet habitable. Second, the concentration of greenhouse gases (mainly carbon dioxide) has increased and there has been a slight increase in global temperatures over the past century. Finally, if present trends continue, carbon dioxide levels will double over the next 50 to 100 years.

Controversy arises when trying to link past changes in temperatures to increased concentrations of greenhouse gases. And it arises again when climate prediction models are used to conclude Earth's temperature will climb drastically in the next century and—based on such models—to propose policy decisions that could drastically affect the economy.

According to Arizona State University climatologist Dr. Robert C. Balling in his book, *The Heated Debate* (San Francisco: Pacific Research Institute for Public Policy, 1992), until knowledge of the interplay between oceans and the atmosphere improves, "model predictions must be treated with considerable caution." Moreover, models don't simulate the complexity of clouds, nor do they deal adequately with sea ice, snow or changes in intensity of the sun's energy.

And they don't stand up to reality testing. Comparing actual temperatures over the last 100 years against model calculations, the models predicted temperature increases higher than those that actually occurred. Moreover, most of the earth's temperature increase over the last century occurred before 1940. Yet, the real build-up in man-made CO_2 didn't occur until after 1940. Temperatures actually fell between 1940 and 1970.

Sifting through such data, Dr. Balling has concluded, "there is a large amount of empirical evidence suggesting that the apocalyptic vision is in error and that the highly touted greenhouse disaster is most improbable."

Other scientists have an even more interesting viewpoint. Notes atmospheric physicist S. Fred Singer, president of the Washington, D.C.-based Science & Environmental Policy Project, "the net impact [of a modest warming] may well be beneficial."

All of which would seem to suggest that the jury's still out on whether drastic steps to curb CO_2 emissions are needed. It would seem that the phenomenon—and its impact on the economy—are important enough to warrant considerably more research before proposing actions we may later regret.

Perhaps the sky isn't falling, after all.

Mobil®

View image in fullscreen

- Left: New York Times, 1984. Right: New York Times, 1993

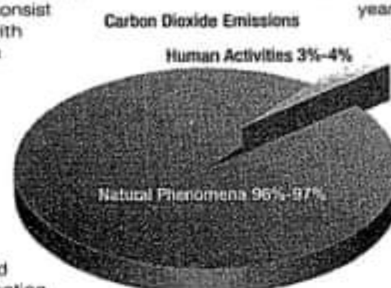
Between 1996 and 1998, for instance, Mobil ran 12 advertorials timed with the 1997 UN Kyoto negotiations that questioned whether the climate crisis is real and human-made and 10 that downplayed its seriousness. “Reset the alarm,” one ad suggested. “Let’s not rush to a decision at Kyoto … We still don’t know what role man-made greenhouse gases might play in warming the planet.”

The forgotten oil ads that told us climate change was nothing | Environment | The Guardian

Science: what we know and don't know

As the debate over climate change heats up, science is being upstaged by the call for solutions. At stake is a complex issue with many questions. Some things we know for certain. Others are far from certain.

First, we know greenhouse gases account for less than one percent of Earth's atmosphere. The ability of these gases to trap heat and warm Earth is an important part of the climate system because it makes our planet habitable. Greenhouse gases consist largely of water vapor, with smaller amounts of carbon dioxide (CO_2), methane and nitrous oxide and traces of chlorofluorocarbons (CFCs).



The focus of concern is CO_2. While most of the CO_2 emitted by far is the result of natural phenomena—namely respiration and decomposition, most attention has centered on the three to four percent related to human activities—burning of fossil fuels, deforestation. The amount of carbon dioxide in the atmosphere has risen in the last 100 years, leading scientists to conclude that the increase is a result of man-made activities.

Although the linkage between the greenhouse gases and global warming is one factor, other variables could be much more important in the climate system than emissions produced by man.

The UN-sponsored Intergovernmental Panel on Climate Change (IPCC) thought it had found the magic bullet when it concluded that the one-degree Fahrenheit rise in global temperatures over the past century may bear a "fingerprint" of human activity. The fingerprint soon blurred when an IPCC lead author conceded to the "uncertainty inherent in computer climate modeling."

Nonetheless, nations at Kyoto are being asked to embrace proposals that could have potentially huge impacts on economies and lifestyles. Nations are being urged to cut emissions without knowing either the severity of the problem—that is, will Earth's temperature increase over the next 50–100 years?—or the efficacy of the solution—will cutting CO_2 emissions reduce the problem?

Within a decade, science is likely to provide more answers on what factors affect global warming, thereby improving our decision-making. We just don't have this information today.

Answers to questions on climate change will require more reliable measurements of temperature at many places on Earth, better understanding of clouds and ocean currents along with greater computer power.

This process shouldn't be short-circuited to satisfy an artificial deadline, like the conference in Kyoto. Whatever effect increased concentrations of man-made gases may have, it will develop slowly over decades. Thus, there is time for scientists to refine their understanding of the climate system, while governments, industry and the public work to find practical means to control greenhouse gases, if such measures are called for. Adopting quick-fix measures at this point could pose grave economic risks for the world.

Mobil The energy to make a difference.

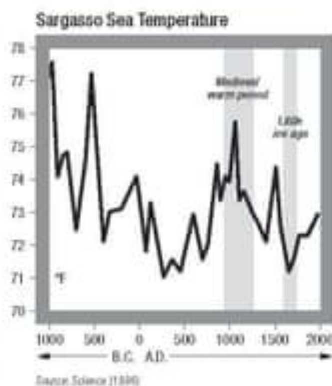
View image in fullscreen

[The forgotten oil ads that told us climate change was nothing | Environment | The Guardian](#)

Unsettled Science

Knowing that weather forecasts are reliable for a few days at best, we should recognize the enormous challenge facing scientists seeking to predict climate change and its impact over the next century. In spite of everyone's desire for clear answers, it is not surprising that fundamental gaps in knowledge leave scientists unable to make reliable predictions about future changes.

A recent report from the National Research Council (NRC) raises important issues, including these still-unanswered questions: (1) Has human activity already begun to change temperature and the climate, and (2) How significant will future change be?



The NRC report confirms that Earth's surface temperature has risen by about 1 degree Fahrenheit over the past 150 years. Some use this result to claim that humans are causing global warming, and they point to storms or floods to say that dangerous impacts are already under way. Yet scientists remain unable to confirm either contention.

Geological evidence indicates that climate and greenhouse gas levels experience significant natural variability for reasons having nothing to do with human activity. Historical records and current scientific evidence show that Europe and North America experienced a *medieval warm period* one thousand years ago, followed centuries later by a *little ice age*. The geological record shows even larger changes throughout Earth's history. Against this backdrop of large, poorly understood natural variability, it is impossible for scientists to attribute the recent small surface temperature increase to human causes.

Moreover, computer models relied upon by climate scientists predict that lower atmospheric temperatures will rise as fast as or faster than temperatures at the surface. However, only within the last 20 years have reliable global measurements of temperatures in the lower atmosphere been available through the use of satellite technology. These measurements show little if any warming.

Even less is known about the potential positive or negative impacts of climate change. In fact, many academic studies and field experiments have demonstrated that increased levels of carbon dioxide can promote crop and forest growth.

So, while some argue that the science debate is settled and governments should focus only on near-term policies—that is empty rhetoric. Inevitably, future scientific research will help us understand how human actions and natural climate change may affect the world and will help determine what actions may be desirable to address the long-term.

Science has given us enough information to know that climate changes may pose long-term risks. Natural variability and human activity may lead to climate change that could be significant and perhaps both positive and negative. Consequently, people, companies and governments should take responsible actions now to address the issue.

One essential step is to encourage development of lower-emission technologies to meet our future needs for energy. We'll next look at the promise of technology and what is being done today.

ExxonMobil

[View image in fullscreen](#)

- Left: New York Times, 1997. Right: New York Times, Wall Street Journal and other publications, 2000

The truth behind the ads: "Exxon's position", instructed internal strategy memos from 1988-89, was to "extend the science" and "emphasize the uncertainty in scientific conclusions" about the climate crisis. Or as a 1998 "Action Plan" by Exxon, Chevron, API, utilities companies and others declared: "Victory will be achieved when average citizens" and the "media 'understands' (recognizes) uncertainties in climate science".

ExxonMobil continued to fund climate denial through at least 2018. One of their 2004 advertorials claimed "scientific uncertainties" precluded "determinations regarding the human role in recent climate change". That was untrue. Nine years

earlier, the UN's Intergovernmental Panel on Climate Change had concluded a "discernible human influence on global climate". ExxonMobil's chief climate scientist was a contributing author to the report.

Economic scaremongering

"Don't risk our economic future," implored the Global Climate Coalition, a front group for utility, oil, coal, mining, railroad and car companies. This 1997 ad also targeted the Kyoto negotiations and was part of a $13m campaign that was so successful that the White House told GCC: President Bush "rejected Kyoto, in part, based on input from you".

Americans Work Hard For What We Have, Mr. President.

Don't Risk Our Economic Future.

Generations of American families have worked hard to make America's economy the strongest in the world.

But that success – and the economic security of our future generations – is suddenly at great risk.

Because right now, our world competitors – countries like China, India, Mexico, and Brazil – are pressuring the United States to support a U.N. global climate agreement that would force American families to restrict our use of the oil, gasoline, and electricity – that heats and cools our homes and schools, gets us to our jobs, and runs our factories and businesses. We'd have to pay more for energy, and, in turn, prices for goods and services would rise.

The big countries that compete with America for jobs, trade, and economic security have everything to gain and nothing to lose. Because according to a prior agreement, they won't have to make the sacrifices Americans are expected to make. This also means America's sacrifices will not produce environmental gains.

That simply isn't fair, or effective.

The climate agreement that President Clinton is under pressure to sign has a big price tag – mostly for American families.

It's a bad deal for America. Today. *And tomorrow.*

A message from members of **The Global Climate Coalition**

View image in fullscreen

- Global Climate Coalition, 1997

The truth behind the ad: Put "emphasis on costs/political realities", instructed a 1989 Exxon strategy memo. Just as the fossil fuel industry funded contrarian scientists to deny climate science, it also touted the flawed economic analyses of industry-funded economists. The best predictors of fossil fuel industry ad spending are media scrutiny and political activity. Today, economic scaremongering has gone digital, with huge spikes in television and social media ad spending by oil lobbies each time climate regulations loom. In the runup to the 2018-20 US midterm and presidential

elections, ExxonMobil spent more on political advertising on Facebook and Instagram than any other company in the world (except Facebook itself).

It’s not our fault, it’s yours

From 2004 to 2006, a $100m-plus a year BP marketing campaign “introduced the idea of a ‘carbon footprint’ before it was a common buzzword”, according to the PR agent in charge of the campaign. The targets of this campaign were the “routine human activities” and “lifestyle choices” of “individuals” and the “average American household”. In 2019, BP ran a new “Know your carbon footprint” campaign on social media.

[The forgotten oil ads that told us climate change was nothing | Environment | The Guardian]

What on earth is a carbon footprint?

Every person in the world has one. It's the amount of carbon dioxide emitted due to our daily activities—from washing a load of laundry to driving a car load of kids to school. Find out the size of your household's carbon footprint, learn how you can reduce it, and see how we're reducing ours at bp.com/carbonfootprint. It's a start.

beyond petroleum

[View image in fullscreen]

Reduce your
carbon footprint.
But first, find
out what it is.

Call it your mark on the world. It's the amount of
carbon dioxide emitted due to your daily activities—
from mowing your lawn to vacuuming your home.
Find out the size of your household's carbon
footprint, learn how you can reduce it, and see how
we're reducing ours at bp.com/carbonfootprint.
It's a start.

View image in fullscreen

- Both ads were published in various publications from 2004 to 2006.

The truth behind the ads: Big oil's rhetoric has evolved from outright denial to more subtle forms of propaganda, including shifting responsibility away from companies and on to consumers. This mimics big tobacco's effort to combat criticism and defend against litigation and regulation by "casting itself as a kind of neutral innocent, buffeted by the forces of consumer demand".

Greenwashing: talk clean, act dirty

"We're partnering with major universities to develop the next generation of biofuels," said Chevron in 2007. This is also a top talking point of BP, ExxonMobil and others.

GALLERIES—DOWNTOWN

TABLES FOR TWO
ZENKICHI

—Mike Peed

DANCE

View image in fullscreen

- The New Yorker, 2007

ExxonMobil has been trumpeting its research into algae biofuels for more than a decade – from black-and-white print ads (2009) to digital commercials (2018-21).

View image in fullscreen

- New York Times, 2009

The forgotten oil ads that told us climate change was nothing | Environment | The Guardian

View image in fullscreen

- New York Times, 2018

The truth behind the ads: Greenwashing confers companies with an aura of environmental credibility while distracting from their anti-science, anti-clean energy disinformation, lobbying and investments. The goal is to defend what BP calls a company's "social license to operate".

One way fossil fuel companies give themselves a green sheen is to establish – then boast about – what a 1998 API strategy memo termed "cooperative relationships" with reputable academic institutions. Big oil's colonization of academia is pervasive. Shell's ongoing sponsorship of the London Science Museum's climate exhibition comes with a gagging clause prohibiting the museum from discrediting the company's reputation.

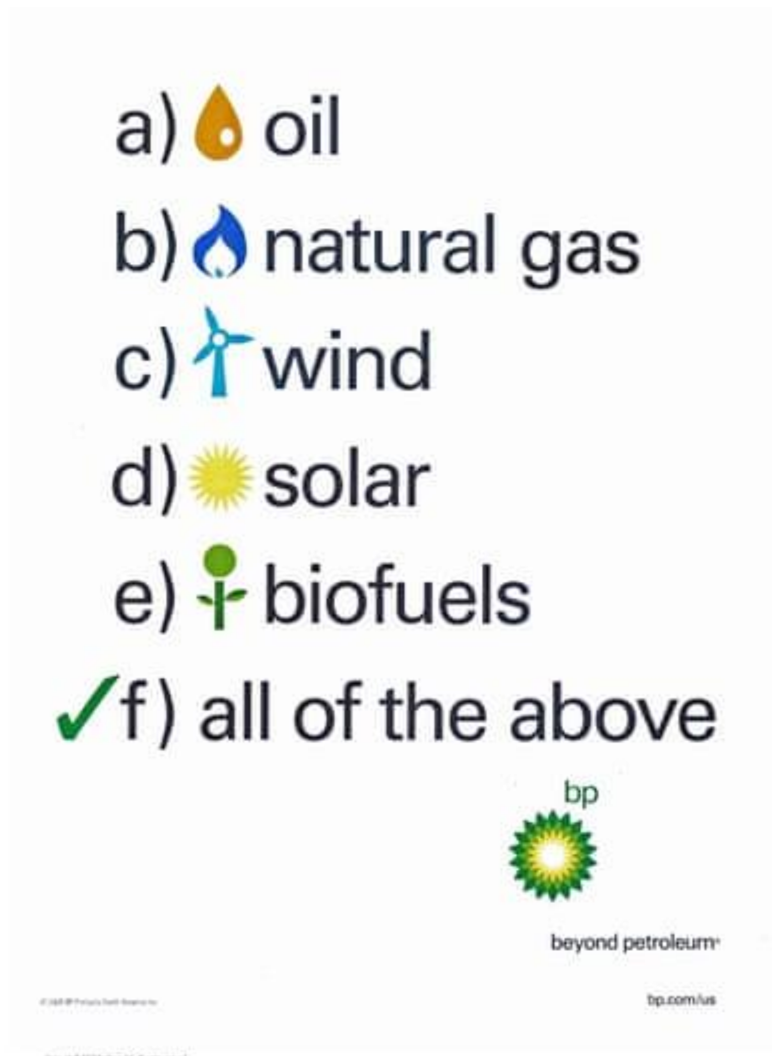
As for algae: America's five largest oil and gas companies spent $3.6bn on corporate reputation advertising between 1986 and 2015. ExxonMobil has spent more on advertising than on algae research.

'We're part of the solution!'

BP "developed an 'all of the above' strategy" for marketing energy from 2006 to 2008, "before any presidential candidates spoke of the same", according to BP's PR lead.

Big oil continues to promote this narrative of "fossil fuel solution-ism', including its "all of the above" language, on social media, in Congress and in paid-for, pretend editorials in the Washington Post. To make this spin stick, fossil fuel companies have been calling methane "clean" since at least the 1980s. "Natural gas is already clean," said API Facebook ads and billboards last year.

[The forgotten oil ads that told us climate change was nothing | Environment | The Guardian]



View image in fullscreen

- One of BP's many 'all of the above' ads grouping oil and natural gas with renewable sources

Real climate solutions won't happen without natural gas and oil

Energy from U.S. natural gas and oil is fundamental to economic recovery and addressing climate change goals.

Any student of U.S. history knows that America met the greatest challenges of our past – the Great Depression,

View image in fullscreen

- American Petroleum Institute native advertising in the Washington Post, 2021

The truth behind the ads: In contradiction to the science of stopping global heating, big oil asserts that fossil fuels will be essential for the foreseeable future. The "all of the above" energy mantra was – as BP's advertising creative put it – "co-opted by politicians in 2008" and became a centerpiece of the Obama administration's energy policies. The campaign also positioned methane as a "clean bridge" fuel.
Like "clean coal", calling methane "clean", "cleanest" or "low-carbon" has been deemed false advertising by regulators.

[The forgotten oil ads that told us climate change was nothing | Environment | The Guardian]