INTERNATIONAL COURT OF JUSTICE

QUESTION OF THE DELIMITATION OF THE CONTINENTAL SHELF BETWEEN NICARAGUA AND COLOMBIA BEYOND 200 NAUTICAL MILES FROM THE NICARAGUAN COAST

(NICARAGUA *v.* COLOMBIA)

COUNTER-MEMORIAL OF THE REPUBLIC OF COLOMBIA

VOLUME II

ANNEXES AND FIGURES

28 September 2017

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LAW 10 OF 4 AUGUST 1978

(Official Journal No. 35.077, 18 August 1978)

LAW 10 OF 1978

(August 4)

Whereby rules on Territorial Sea, Exclusive Economic Zone and Continental shelf are set, and other provisions are issued

The Congress of Colombia

Decrees:

Article 1. The territorial sea of the Colombian Nation over which it exercises full sovereignty extends beyond its mainland and insular territory and its internal waters up to a breadth of 12 nautical miles or 22 kilometers 224 meters .

The national sovereignty also extends to the space situated above the territorial sea, as well as to the seabed and subsoil of this sea .

Article 2. The ships of any State enjoy the right of innocent passage through the territorial sea, pursuant to the rules of international law .

Article 3. The outer limit of the territorial sea is determined by a line drawn so that its points are located at a distance of 12 nautical miles from the nearest points of the baselines referred to in the following article .

Article 4. The normal baseline for measuring the breadth of the territorial sea shall be the low-water mark along the coast . In places where the coast has deep openings or indentations, or where there is a fringe of islands along the coast located in its immediate vicinity, the measurement shall be taken from the straight baselines joining the relevant points .The waters located between the baselines and the coast shall be considered as internal waters .

Article 5. In gulfs and bays the natural entrance points of which are at a distance under 24 miles, the territorial sea shall be measured from a demarcation line joining the referred-to points .

The waters enclosed by that line shall be considered internal waters .

If the mouth of the gulf or bay exceeds 24 nautical miles, a straight baseline of that length may be drawn within it, enclosing the maximum possible area of water .

Article 6. In rivers flowing directly into the sea, the baseline shall be a straight line drawn across the mouth of the river between the points on the low-water line of its banks .

Article 7. Adjacent to the territorial sea, an exclusive economic zone the outer limit of which shall extend up to 200 nautical miles, measured from the baselines from which the breadth of the territorial sea is measured, is established .

Article 8. In the zone established in the preceding article, the Colombian Nation shall exercise sovereign rights for the purpose of sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the seabed and its subsoil, and of the waters superjacent [to the seabed]; also, it shall exercise exclusive jurisdiction for scientific research and for the preservation of the marine environment .

Article 9. Pursuant to this Law, the Government shall proceed to state the lines referred to in the preceding articles on its mainland territory, on the Archipelago of San Andrés and Providencia and other insular territories .They shall be published in the official nautical charts, in accordance with the rules of international law on the matter .

Article 10. The sovereignty of the Nation extends to its continental shelf for the purposes of exploring and exploiting the natural resources .

Article 11. The National Government is granted powers, for the term of twelve months, as of the signing into law of this Law, to issue the provisions, reorganize the national administrative entities and dependencies, or to create those which might be necessary, to provide for the surveillance and defense of the Colombian maritime areas and achieve the due use of the living

and non-living natural resources located in them, for the benefit of the needs of the Colombian people and the economic development of the country .

By virtue of these powers the National Government shall be enabled to contract loans, make the necessary budgetary provisions and transfers that it deems fit .

Article 12. The provisions contrary to the present Law are derogated .

Article 13. This Law shall rule as of [the date of] its promulgation .

Issued in Bogotá, D E ., on 25 July 1978 .

The President of the honorable Senate, Guillermo Plazas Alcid . The President of the honorable House of Representatives, Jorge Mario Eastman .The Secretary-General of the honorable Senate, Amaury Guerrero . The Secretary-General of the honorable House of Representatives, Jairo Morera Lizcano .

Republic of Colombia – National Government
Bogotá, D .E ., 4 August 1978 .

Be it published and executed .

ALFONSO LÓPEZ MICHELSEN

The Minister of Foreign Affairs, Indalecio Liévano Aguirre .

Annex 2

LAW 1 OF 8 FEBRUARY 1972

(Official Journal No. 33.525, 22 February 1972)

LAW 1 OF 1972

(February 8)

Whereby a Special Statute for the Archipelago of San Andrés and Providencia is issued.

The Congress of Colombia

Decrees:

Chapter 1. Legal nature

Article 1. The intendency of San Andrés and Providencia shall be subject to the administrative and taxation regime prescribed herein and shall hereafter be named Special Intendency of San Andrés and Providencia .

Article 2. The territory of the Special Intendency shall be constituted by the islands of San Andrés, Providencia and Santa Catalina and all the other islands, islets, cays and reefs currently conforming the Intendency of San Andrés and Providencia . Its capital shall be the city of San Andrés .

Article 3. The municipality of San Andrés shall be suppressed . Its goods, revenues, rights and obligations are now owned and shall be borne by the Special Intendency .

Paragraph 1o . A Regional General Judge shall operate in the San Andrés Island and shall have the same competencies and attributions established for Municipal General Judges .

Paragraph 2o .A General Judicial Authority before the Regional General Judge is hereby established for the San Andrés Island, which shall also perform the duties of the Regional representatives of the Office of the Attorney General .

The properties acquired in violation of Article 5° of Decree 1415 of 1940 may be expropriated, for reasons of equity, without prior indemnification, in accordance with Article 30 of the National Constitution .

Article 4. The municipality of Providencia shall continue functioning in accordance with the ordinary municipal regime . The Major of the Municipality of Providencia shall be appointed by the Intendant .

Chapter 1. Administrative Regime

Article 5. The Special Intendency shall have an Intendant, who at the same time shall be an agent of the Government and Head of the Administration of the Intendency .The Intendant shall be appointed and removed by the President of the Republic .

Article 6. The Intendant shall have the following functions:

1 . Comply with, and enforce compliance in the Special Intendency, of the Constitution, Laws, Decrees and Orders from the Government, and coordinate administrative action of national entities within the Special Intendency, in accordance with any delegation act assigned to it .

2 . Implement the Agreements of the Council of the Intendency created hereby .

3 . Manage the administrative action of the Special Intendency, designate and remove agents freely, reform and revoke their administrative acts, issue any necessary order in all the areas of the local administration and coordinate and supervise the decentralized entities of the Intendency's level.

4 . Promote, manage, coordinate, supervise and enforce the plans and programs for the economic, social and physical development of the Special Intendency .

5 . Speak on behalf of the Special Intendency and represent it in administrative and judicial matters, having the possibility of delegating such responsibility in accordance with the law .

6 . Present before the Council of the Intendency draft agreements about plans and programs for economic, social

and physical development of public works and the budget for income and expenditures .

7 . To assist the justice in accordance with the law .

8 . To object for reasons of unconstitutionality, illegality or inconvenience, draft agreements and to sanction and promulgate them according to the law .

9 . Create, suppress or merge such positions as required by the services of the intendency, establish its functions, and set its remunerations . The Intendant shall not establish obligations exceeding the global amount set for the respective service in the budget to be approved by the Council, if such obligations are to be funded with the national budget .

10 . Enter into contracts for providing services or carrying out public works, in accordance with the law and the agreements of the intendency .

11 . Regulate the prices of basic necessities in the territory of the intendency, in coordination with the National Superintendency on Prices .

12 . All other functions set forth in the Constitution, the laws and the agreement of the intendency .

Single paragraph .The Intendent of San Andrés and Providencia shall not form part of the Regional Board of Incomex .

Article 7. The Intendency shall have an Administrative Corporation composed of locally elected people, to be named Council of the Intendency, conformed by no less than nine and no more than fifteen members, representing the respective population in a ratio of one per four a thousand inhabitants .The number of alternates shall be equivalent to that of the principal members and the former shall replace the latter in case of temporary or final absences, in accordance with the order of positions in the respective electoral list .

Paragraph 1 . In order to become Council member it is required to comply with the same capabilities established by the law for a Representative to the Departmental Assembly .

Paragraph 2 . The Council of the Intendency shall meet in its own right every year, on 1 October, in the capital of the Intendency, for a period of two months . The Intendant can convene it for extraordinary meetings when he finds it necessary and to decide on such issues exclusively presented for its consideration . The date of ordinary meetings shall be established by means of a decree; the regime of incompatibilities of the Council Members shall be the same as the one applicable to the Representatives to the Departmental Assemblies .

Article 8. The Council of the Intendency shall enact Agreements to:

1 . Regulate the provision of such public services the Special Intendency directly provides .

2 . Enact the yearly budget of income and expenditures of the Special Intendency, based on the draft prepared by the Intendent .

3 . Approve the policies and plans on economic, social and physical development and the program of public works of the Special Intendency .

4 . Establish the structure of the administration of the intendency, the functions of the different dependencies and the scales of remuneration corresponding to the different categories of positions .

5 . Create, as per request from the Intendent, public establishments, mixed-ownership companies and industrial and commercial corporations .

6 . Regulate issues related to the local police in matters that have not been regulated by other laws .

7 . Authorise the Intendent to enter into agreements, negotiate loan agreements, sell goods of the intendency and temporarily exercise the functions of the Council .

8 . Vote, in accordance with the Constitution and the laws, on the contributions and local expenditures and establish the fees and charges for public services directly provided by the Special Intendency .

9 . Organise the public finances and order the issuance of public debt certificates .

10 . Create, separate and suppress municipalities and decide on their administration, in accordance with the Constitution and the laws .

Paragraph . The creation, separation and suppression of municipalities requires prior approval from the National Government .

Chapter III. Regime of Decentralised Entities of the Intendency's Level

Article 9. The Public Services Company for the Intendency of San Andrés shall be responsible, in the future and in the territory of the Archipelago, for all the public services assigned to it by the Council of the Intendency and shall continue to benefit from the revenues, contributions and aids granted to it . The Council of the Intendency shall proceed to assign the legal nature and the rights and obligations it will assume hereafter, in accordance with the provisions of the present Law .

Article 10. The corporation for the Promotion and Tourism of San Andrés created by means of Decree number 3290 of 30 December 1963 is hereby suppressed .

Paragraph . In accordance with the provisions of Article 5 of Decree 1415 of 18 July 1940, the National Government shall promote the actions to be carried out in order to recover the areas located in the coasts of the Archipelago which, having been adjudicated as wastelands, have been transferred to foreign nationals .

Chapter IV. Of the Taxation and Budgetary Regimes

Article 11. The Special Intendency shall have an independent budget which shall be prepared, managed and administered in accordance with the organic rules for such effect enacted by the National Government and such special rules enacted hereby .

Paragraph .The municipality of Providencia shall receive no less than 10% from the total of the revenues of the Intendency .The Municipality of Providencia shall assign the amount referred to in this paragraph to projects of social and economic development .

Article 12. On the first day of November of each year, the Intendent shall present the draft revenues and income budget and the budget on investments and expenditures for the following fiscal year, to the Council of the Intendency .

Article 13. If the Council of the Intendency does not issue the budget, the one presented by the Government of the Intendency shall rule .

Article 14. The Council of the Intendency shall not increase any of the expenditure items proposed by the Government of the Intendency, or add a new one, either by reducing or eliminating an item or by increasing the estimate of incomes and other resources, without its approval .

Article 15. When the Government of the Intendency identifies the need for an essential expenditure, the Council being in recess, and if there is no relevant item voted for or if this one is insufficient, a supplementary or extraordinary credit may be opened . Only the approval of the Budget Committee of the Council shall be required for such purpose .

Article 16. No draft agreement affecting the Treasury of the Intendency, which implies an increase in expenditures, may be approved if the text itself does not determine the revenues intended to meet them. When the increase of expenses can be carried out with resources the collection of which has been previously authorized, the Government of the Intendency shall not be obliged to propose the establishment of new resources .

Article 17 . The Council of the Intendency may not reduce or delete items proposed by the Intendant:

1o .For the service of public debt .
2o . To meet contractual obligations .
3o .For the complete acceptance of the ordinary services of the administration regarding public order and planned works .
4o . To cover the fiscal deficit, if any .

Article 18. The remuneration of local employees and the wages of workers at the service of the Administration may not be reduced or increased except on the initiative of the Intendant .

Article 19. There shall be a budgetary unit .The draft budget for all revenues or incomes shall form a common stock from which all expenditures shall be paid . No special destinations shall be accepted . The resources coming from the credit shall be assigned to a special account, but shall not comprise a separate budget .

Paragraph . In order to comply with contractual commitments and legal provisions on the special destination of some revenues, appropriations covering the respective amount of the service or commitment shall be included .The larger part of such revenues regarding the initial estimates or the amount of the service or commitment shall be constituted with common funds . Nevertheless, the Council, at the initiative of the Intendant, may assign a special destination to those revenues .

Article 20. As an annex to the budget, the revenue and expenditure budgets of all companies, decentralized agencies, and revolving funds shall be included .

Article 21. Companies, decentralized agencies or revolving funds that do not present their budgets for inclusion as annexes to the local budget, shall be suspended of the payment of the sums that, for any reason, should be charged to the Budget of the Intendency and those responsible shall be liable to administrative sanctions .

Article 22. The agreement of appropriations or investments and the expenses budget shall be based on the budget of revenues

and expenditures; the total amount of the first shall not exceed the total amount of the second, and the principle of equilibrium shall be maintained between them .

Article 23. The already established national, provincial or municipal taxes shall continue to be applicable and shall be perceived by the Special Intendency, with the exception of those assigned to the Municipality of Providencia which shall be perceived by it .

Article 24. The Special Intendency will continue to enjoy the contributions, participations, national aid and other participations that the law establishes for the Intendencies .

Article 25. Any inheritance or legacy of less than three hundred thousand pesos ($ 300,000) that was caused in the Special Intendency before 31 December 1971 shall be exempt from inheritance tax, hereditary global mass, allowances and surcharges, when the deceased and his heirs are or have been naturals of the said territory .

Article 26. In the year following the promulgation of the present Law, the Government is authorised to enact special rules and procedures for the use of property in the Archipelago of San Andrés and Providencia, which shall govern for a specified period of time .

Paragraph .In accordance with Article 5o .of Decree 1415 of 18 July 1940, the National Government shall promote the actions that may be necessary for the purpose of recovering the lands located on the coast of the Archipelago which, having been declared as wastelands, have been transferred to foreign citizens .

Article 27. The National tax on sales shall not be collected in the Special Intendency .

Article 28. The fiscal control in the Special Intendency and the organism that is hereby created shall be under the control of the Office of the Comptroller General of the Republic .

Article 29. The Office of the Comptroller General of the Republic shall enact a Statute on decentralized fiscal control for

the Special Intendency, in accordance with the administrative regime set forth in this law .

Chapter V. Customs and Exchange Regime

Article 30. The current customs and exchange regime of Free Port shall be preserved in the Special Intendency, in accordance with the laws currently in place .

Paragraph: The foreign goods imported by traders to the Intendency of San Andrés and Providencia through the free zone of Barranquilla shall pay a tax of 5% .

Article 31. The foreign goods that enter into the rest of the national territory shall pay a tax of fifteen cents per each peso ($ 1 .00) or fraction thereof, tax that shall be perceived by the Intendency of San Andrés and Providencia .

Chapter VI. Final Provisions

Article 32. The Government is hereby authorised to coordinate the transit of the current legislation to the one provided for herein .

Article 33. While the administrative reorganization of the Special Intendency is carried out, in accordance with the provisions of this Law, the dependencies and officials of the Intendency and the Municipality of San Andrés shall continue to provide the services and activities and the remuneration to employees shall be equally paid . Likewise, the incomes, revenues and aids that are currently received shall continue to be perceived by such entities until the reorganization is being carried out .

Article 34. For all legal purposes, the Archipelago of San Andrés and Providencia is hereby declared as a neighbouring region with Central America and the Antilles . Paragraph . The persons who stay for 5 days in the Special Intendency of San Andrés and Providencia, shall be able to travel to the countries of Central America and the Antilles and will be exempt from the payment of the taxes to leave the country .

Article 35. All hotels, apartment buildings, industries and constructions intended for cultural purposes to be established in the territory of San Andrés and Providencia shall be exempt from the payment of income and complementary taxes, for the term of ten years .

Article 36. For reasons of national sovereignty, the lands or coastal areas of the Archipelago of San Andrés and Providencia are hereby declared as of public utility .The properties acquired in violation of Article 5o . of Decree 1415 of 1940, may be expropriated, for reasons of equity and without prior compensation, in accordance with Article 30 of the National Constitution .

Article 37. The legal regulations on intendencies shall not be applied in the case of the Special Intendency and those that regulate the Intendency of San Andrés and Providencia that are contrary to the provisions contained in the present law are hereby derogated .

Article 38: This law shall rule as of the date of its sanction .

Issued in Bogotá, D .E .,on the fiftieth day of the month of December of year nineteen seventy one .

The vice-president of the H .Senate, Manuel Mosquera Garces; The vice-president of the H .Chamber of Representatives, David Aljure Ramírez; The Secretary-General of the H . Senate, Amaury Guerrero; The Secretary-General of the H .Chamber of Representatives, Nestor Eduardo Niño Cruz .

Republic of Colombia – National Government
Bogotá . D. E ., 8February 1972 .Be it published and executed .

MISAEL PASTRANA BORRERO

The Minister of Government, Abelardo Forero Benavides .
The Minister of Treasury and Public Credit, Rodrigo Llorente Martínez.

Annex 3

MINISTRY OF ENVIRONMENT, RESOLUTION NUMBER 1426 OF 20 DECEMBER 1996, EXCERPTS FROM THE REASONING SECTION AND ARTICLES 1 AND 2

(Archives of the Colombian Ministry of Environment and Sustainable Development)

MINISTRY OF ENVIRONMENT

RESOLUTION NUMBER 1426

(20 December 1996)

Whereby the Special Management Area 'The Corals' of the Archipelago of San Andrés, Providencia and Santa Catalina is reserved, its boundaries are marked out and it is declared.

The Minister of Environment, in the exercise of its legal powers, in particular Article 6 of Law 99 of 1993, and,

Considering:

That the region of the Archipelago of San Andrés, Providencia and Santa Catalina is located in the "Insular Oceanic Caribbean Territories" bio-geographical region, where the bio-geographical districts of San Andrés, Providencia, and the Cays and Banks of the Archipelago (Serrana, Serranilla, Roncador, Quitasueño, Albuquerque, East South-East) are located, which contain highly productive and biodiverse ecosystems, the preservation of which is in the global interest .

(…)

That from the ecological, economic and social studies carried out on the area it can be inferred the need to fully protect the renewable natural resources of the region, subjecting it to a special management in order to ensure the perpetuation of its natural resources and cultural values, the healthy environment for its inhabitant and the continued availability of resources .

(…)

Decides:

First Article: Pursuant to Article 308 of Decree-Law 2811 of 1974, the Archipelago Department of San Andrés, Providencia and Santa Catalina, as enacted by Article 309 of the National Constitution, is declared as a Special Management Area for the

administration, management and protection of the environment and natural renewable resources .

Paragraph: The Area of Special Management declared in this article is comprised of the islands of San Andrés, Providencia and Santa Catalina, Albuquerque Cays, East South-East, Roncador, Serrana, Quitasueño, Bajo Nuevo, Serranilla and Alicia Banks, the remaining islands, islets, cays, hills, banks and reefs, and the territorial sea included within the jurisdiction of the Archipelago Department of the San Andrés, Providencia and Santa Catalina .

Second Article: The Area of Special Management created pursuant to this Resolution will be called "Special Management Area 'The Corals' of the Archipelago of San Andrés, Providencia, Santa Catalina and Cays" and has the following purposes:

1 .- Protecting the environment by regulating the activities that are carried out within the area .

(…)

3 .- Regulating land use according to its characteristics and potential .

(…)

Annex 4

MINISTRY OF ENVIRONMENT, HOUSING AND TERRITORIAL DEVELOPMENT, RESOLUTION NUMBER 107 OF 27 JANUARY 2005

(Official Journal No. 45.809, 1 February 2005)

MINISTRY OF ENVIRONMENT, HOUSING AND TERRITORIAL DEVELOPMENT

RESOLUTION 107 OF 2005

(27 January)

Whereby a Marine Protected Area is declared and other provisions are enacted

The Minister of Environment, Housing and Territorial Development, in exercise of the legal powers provided for in paragraph 10 of article 6º of Decree 213 of 2003, and especially in Law 165 of 1994, and

Considering:

That the Colombian Constitution establishes that it is an obligation of the State and its people to protect the natural and cultural riches of the Nation, as well as to ensure the right to a healthy environment;

That it also establishes in its articles 80 and 95 paragraph 8, the duty to protect the diversity and integrity of the environment, the preservation of areas of special ecological importance, the planning, management and use of natural resources to ensure their sustainable development, preservation, restoration or replacement, as well as to prevent environmental deterioration factors;

That Colombia signed the Convention on Biological Diversity – CDB -, approved by means of Law 165 of 1994, aimed at preserving biological diversity, promoting the sustainable use of its components and a fair and equitable sharing of the benefits resulting from the use of genetic resources, through an adequate use of those resources, an appropriate transfer of technology and judicious funding;

That the Convention also establishes marine protected areas as an essential instrument for the development of marine and costal ecosystems;

That the Convention on Biological Diversity provides, among others, that each Contracting Party shall establish a system of protected areas or areas in which special measures shall be taken in order to preserve biological diversity; moreover, they shall set out guidelines for the selection, establishment and orderly management of protected areas or areas in which special measures shall be taken in order to preserve biological diversity; and, that they shall promote the protection of natural habitats and ecosystems and the maintenance of viable populations of species within natural surroundings;

That it is also the responsibility of each Contracting Party to promote an adequate and sustainable environmental development in zones adjacent to protected areas in order to increase the protection of those zones; to rehabilitate and restore degraded ecosystems, promoting the recovery of endangered species through, among others, the drafting and implementation of plans and other orderly management strategies, with the purpose of establishing the conditions necessary for harmonizing current uses with the preservation of biological diversity and the sustainable use of its components;

That within the framework of the above-mentioned Convention, the Jakarta Mandate and its work program was adopted in 1995, in relation to marine and costal biodiversity, the strategic elements of which are:

a) The integrated management of marine and coastal zones;
b) The sustainable use of living marine resources;
c) The promotion of the establishment of marine and coastal protected areas;
d) The sustainable shrimp farming, and
e) The control to the introduction of invasive and exotic species and genotypes;

That Colombia is also party to the Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region (Law 59 of 1987) and its Protocol Concerning Specially Protected Areas and Wildlife (Law 356 of 1997), aimed at protecting, restoring and improving the state of the marine ecosystems, as well as protecting threatened or endangered species and their habitats in the Wider Caribbean

region, through, among others, the establishment of protected areas in the marine areas and associated ecosystems;

That in the year 2000, UNESCO declared the Archipelago Department of San Andrés, Providencia and Santa Catalina as the Seaflower Biosphere Reserve, including the proposed zoning and management plan contained in that declaration;

That the proposed Management Plan for the Seaflower Biosphere Reserve seeks to contribute to generate processes that create favourable conditions in order for social development to be based on the sustainability of the various lifeforms, ecosystems and natural resources, by means of:

a) The preservation of strategic areas for the protection of the biological, genetic and cultural diversity of the Archipelago
b) Being a model in terms of territorial orderly management as well as a place for sustainable development experimentation, and
c) Allocating areas for research, constant observation, education and training for the Reserve's residents and visitors;

That the preservation and sustainable use of the natural resources of the Biosphere Reserve are part of the regional development and must follow the internationally identified management guidelines for three areas of intervention: core zones, buffer zones, and transition or cooperation zones that include the entire marine area beyond the barrier reef;

That the notions of sustainable development shall be applied to the three zones, in order for activities to be sustainable in time, as well as equitable and profitable from a social, ecological and economic perspective, ensuring a joint and coordinated work between local communities, government agencies, conservation and scientific organizations, civil associations, cultural groups, private companies and other interested parties in the sustainable management and development of the Archipelago;

That within the proposed zoning, the following core zones from the Biosphere Reserve are included:

a) In Providencia and Santa Catalina islands: Marine zone: the Mc Bean Lagoon National Natural Park, the mangroves, the Cangrejo and Tres Hermanos Cays, the reef barrier and associated communities;
b) In San Andrés island: Marine zone: the reef barrier and associated communities;
c) In the southern and northern cays: the Cays of Alburquerque, Quitasueño, Roncador along with its reef barrier and the eastern sector of Serrana Cay;

That the Ministry of Environment, Housing and Territorial Development by means of Resolution 1426 of 20 December 1996, reserves, sets out the boundaries of, and declares the "Corals of the Archipelago of San Andrés, Providencia, Santa Catalina and Cays", as a Special Management Area for the administration, management and protection of the environment and renewable natural resources of the area of the Archipelago Department of San Andrés, Providencia and Santa Catalina;

That such Special Management Area is formed by the islands of San Andrés, Providencia and Santa Catalina; the Cays of Roncador, Quitasueño, Serrana, Serranilla, Bajo Nuevo, Albu4querque and the group of the East-Southeast Cays as well as all the other adjacent islets, cays, banks and atolls, and the territorial sea comprised within the jurisdiction of the Archipelago Department of San Andrés, Providencia and Santa Catalina, which contain ecosystems of high productivity, biological diversity and the most important areas of coral reef ecosystems within the national territory;

That by means of Decree 216 of 3 February 2003, the objectives and organizational structure of the Ministry of Environment, Housing and Territorial Development were determined, and its functions distributed, among which, under the Directorate of Ecosystems, according to article 12 paragraph 3, it shall "propose strategies and policies for the creation, administration and management of special management areas and other protected areas, jointly with the Special Administrative Unit of the National Natural Parks System and other environmental authorities…";

That the National Development Plan "Towards a Communitarian State" established the environmental sustainability strategy to promote the development of actions focused on the preservation, management, use and restoration of ecosystems, taking environmental policies into account and thus seeking to consolidate the State's governance of, and legitimacy in, environmental management;

That in accordance with the National Environmental Policy for the Sustainable Development of Ocean Areas and Coastal and Insular Spaces of Colombia (PNAOCI) adopted by the National Environmental Council on 5 December 2000, and the various international treaties adopted by Colombia, there is a defined need of promoting programs for the integrated management of marine and coastal areas and the sustainable use of their resources by means of the environmental territorial organization of ocean areas and costal and insular spaces, so as to contribute to improving the quality of life of the Colombian population and to the preservation of marine and coastal ecosystems and resources;

That in accordance with document Conpes 3164: "2002-2004 Action Plan of the National Environmental Policy for the Sustainable Development of Ocean Areas and Coastal and Insular Spaces of Colombia", the development of the Areas and Marine Protection Program aims at establishing the subsystem of Marine Protected Areas (MPA) as part of the National System of Protected Areas (SINAP), integrated by marine and coastal areas of particular ecological, socioeconomic and cultural importance .The prioritised activities of this program for the relevant time period are the definition of criteria for the establishment of Marine Protected Areas and joining these to the National System for Protected Areas or other protection schemes;

That pursuant to the Territorial Organization Plan for San Andrés Island, adopted by Decree 325 of 18 November 2003, the environmental structure of the insular territory is formed by the following:

a) The land and/or maritime lines, areas, belts or sections determined by the zoning of the Biosphere Reserve;

b) The System of Protected Areas determined by the level of environmental fragility or vulnerability;
c) The littoral area, beaches and marine areas up to the 12-nautical miles' line;
d) The marine areas of underwater landscape, and
e) The marine protected areas . Likewise, areas requiring special protection as a result of the zoning of the Biosphere Reserve, among them, the marine protected areas, are part of the System of Protected Areas of the Territory's Environmental Structure;

That during the latest meeting of the Conference of the Parties to the Convention on Biological Diversity - COP 7, held in February 2004, in its decision VII/5, the Contracting parties are requested to advance in establishing and/or strengthening regional and national systems of marine and coastal protected areas, integrating them to the global network as a contribution towards achieving global objectives for the preservation of marine and coastal biodiversity;

That pursuant to the above-mentioned decisions, the Corporation for the Sustainable Development of the Archipelago of San Andrés, Providencia and Santa Catalina, Coralina, has been developing since the year 2000, a regional strategy that seeks to protect the natural resources in the marine area of the Biosphere Reserve in an adequate and environmentally sustainable manner, by identifying areas of special importance for protection and preservation, including their definition and zoning, and that could become part of the National System of Marine Protected Areas;

That taking into account the importance of the Archipelago of San Andrés, Providencia and Santa Catalina, due to its ecosystems and resources of strategic value that provide environmental goods and services at the base of the sustainable development and preservation of the country's environmental heritage, it is of interest to the Ministry of Environment, Housing and Territorial Development, as the highest environmental authority, to declare the Marine Protected Area within the Seaflower Biosphere Reserve . The purpose is to preserve representative samples of the eco-systemic, specific

and genetic marine biodiversity of the Archipelago Department of San Andrés, Providencia and Santa Catalina;

That for purposes of complying with this resolution, the agencies in charge of its implementation shall take into account all the bilateral and multilateral international commitments undertaken by Colombia in the area;

That the Archipelago of San Andrés, Providencia and Santa Catalina is formed by the islands of San Andrés, Providencia and Santa Catalina, the Cays of Roncador, Quitasueño, Serrana, Serranilla, Bajo Nuevo, Alburquerque and the group of the East-Southeast Cays, as well as all the other adjacent islets, cays, banks and atolls;

That the maritime areas appertaining to the aforesaid archipelago extend towards the west up to Meridian 82º 00'00'' W of Greenwich, agreed in the 1928 Esguerra-Bárcenas Treaty and its 1930 Protocol of Exchange of Ratifications; and towards the north and northeast, in accordance with the delimitations established with the Republic of Honduras in the 1986 Ramírez-López Treaty and with Jamaica in the 1993 Sanin-Robertson Treaty;

That the cartographic base for the delimitation and zoning of the Marine Protected Areas within the Archipelago Department of San Andrés, Providencia and Santa Catalina is Chart COL 008 "Bank Rosalinda to San Andrés Island", First Edition, scale 1:1 .000 .000, published by the Maritime Directorship-General of the Navy of the Republic of Colombia in November 1998;

That taking into account the foregoing considerations,

Decides:

Article 1°. To declare as Marine Protected Area (AMP) of the Seaflower Biosphere Reserve, a zone within the Archipelago Department of San Andrés, Providencia and Santa Catalina, that due to its special ecological, economic, social and cultural importance, is delimited within the following coordinates:

Coordinates		
Point	Latitude	Longitude
1	14º 59’ 08” N	82º 00’ 00” W
2	14º 59’ 08” N	79º 50’ 00” W
3	13º 10’ 00” N	79º 50’ 00” W
4	13º 10’ 00” N	81º 00’ 00” W
5	12º 00’ 00” N	81º 00’ 00” W
6	12º 00’ 00” N	82º 00’ 00” W

Article 2º. Purpose .The purpose of the MPA declared and the outer limits of which are delimited pursuant to this resolution, is to preserve representative samples of marine and coastal biodiversity from the ecological basic processes that support the Archipelago’s environmental supply; as well as to preserve the social and cultural values of its population, and to promote the integration of the national and regional levels within the Seaflower Biosphere Reserve .

Article 3º. Administration of the MPA. The administration and environmental management of the Marine Protected Area will be incumbent upon the Ministry of Environment, Housing and Territorial Development with regard to areas declared or those that may be declared as forming part of the National Natural Parks System; with regard to all other matters, it will be incumbent upon the Corporation for the Sustainable Development of the Archipelago of San Andrés, Providencia and Santa Catalina, Coralina .

Paragraph .The foregoing is without prejudice to the attributions of other authorities at the national, regional and municipal levels .

Article 4º. Internal delimitation of the MPA. The Board of Directors of Coralina shall decide on the internal delimitation of the Marine Protected Area hereby declared and shall define the general guidelines for its subsequent zoning .

Article 5°. Technical Advisory Committee. The Board of Directors of Coralina may create a Technical Advisory Committee, to provide technical assistance in matters relating to the ecological, economic and sociocultural criteria that are to

guide the process of internal zoning of the Marine Protected Area and the regulation of its uses .

Article 6º. This resolution is effective as of the date of its publication in the Official Journal and revokes Resolution 0876 of 23 July 2004 and any other contrary provisions .

Be it published and complied with .

27 January 2005

The Minister of Environment, Housing and Territorial Development

[*Signed*]
Sandra Suárez Pérez

Annex 5

COLOMBIAN INSTITUTE FOR AGRARIAN REFORM, RESOLUTION NUMBER 206 OF 16 DECEMBER 1968, ARTICLES 3, 4 AND 5

(Archives of the Colombian Ministry of Agriculture and Rural Development)

COLOMBIAN INSTITUTE FOR AGRARIAN REFORM

RESOLUTION NUMBER 206 OF 1968

(16 December)

Whereby certain areas from the Archipelago of San Andrés and Providencia are removed from the territorial reserve of the State and certain sectors therein are declared as special reserves.

(…)

Resolves

Article Three: To declare the following sectors of the Archipelago of San Andrés and Providencia as special reserve zones, with the purpose of preserving the flora, fauna, lake levels, the creeks and natural scenic beauties:

(…)

Cays and Banks

Preservation Zones

(…)

b) The Cay of Serrana and the banks of Roncador, Quitasueño, Serrana, Serranilla, Bajo Nuevo and Alicia .

Article Four: To declare the following sectors of the Archipelago of San Andrés and Providencia as special reserve zones for tourism purposes:

(…)

Cays and banks .

All of the cays and banks that form part of the Archipelago of San Andrés and Providencia, excluding Cangrejo and Serrana Cays as well as the banks of Roncador, Quitasueño, Serranilla,

Bajo Nuevo and Alicia, comprised within the intangible preservation zones dealt with in the previous article . . . .

(…)

Article Five: Within the tangible preservation zones described in Article 3 of the present Resolution it is forbidden to occupy the land, to hunt or to fish . All kinds of activity in industry, cattle or agriculture that is incompatible within the preservation of the flora, fauna, water sources and scenic nature beauties is also forbidden .

(…)

Annex 6

CORPORATION FOR THE SUSTAINABLE DEVELOPMENT OF THE SAN ANDRÉS, PROVIDENCIA AND SANTA CATALINA ARCHIPELAGO - CORALINA, AGREEMENT NUMBER 025 OF 4 AUGUST 2005

(Available at: http://www.coralina.gov.co/coralina/informacionciudadano/normatividad/acuerdos-coralina/acuerdos-coralina-2005)

REGIONAL AUTONOMOUS CORPORATION FOR THE SUSTAINABLE DEVELOPMENT OF THE ARCHIPELAGO OF SAN ANDRÉS, PROVIDENCIA AND SANTA CATALINA

AGREEMENT NUMBER 025

(04 August 2005)

Whereby the Marine Protected Area of the SEAFLOWER Biosphere Reserve is internally zoned, and the General Regulatory Framework of Uses and other provisions are enacted

The Board of Directors of the Corporation for the Sustainable Development of the San Andrés, Providencia and Santa Catalina Archipelago, in exercising its legal and statutory responsibilities, especially those conferred by Law 99 of 1993, Decree 1768 of 1994, Resolution 0107 of 27 January 2005, and

Considering

That the Ministry of Environment, Housing and Territorial Development, by means of Resolution 0107 of 27 January 2005, instituted as Marine Protected Area - MPA - of the *SEAFLOWER* Biosphere Reserve, a zone within the Archipelago Department of San Andrés, Providencia and Santa Catalina, on account of its ecological, economic, social and cultural significance .

That the purpose of the declared MPA is to preserve representative samples of the marine and coastal biodiversity, of the basic ecological processes that support the Archipelago's environmental offer and the social and cultural values of its inhabitants, and to promote the integration of national, regional and local levels within the Biosphere Reserve - *SEAFLOWER* - for its administration and management .

That the zoning and its general regulatory framework of uses constitute the main planning instrument for the conservation and management of the MPA, and the environmental determining aspects which guide the different sustainable activities to be

carried out within the MPA zones will be established thereunder .

That the zoning and its general regulatory framework of uses are drafted in consideration of the ecological, socio-economic and cultural values which oriented the inclusion of the Archipelago Department of San Andrés, Providencia and Santa Catalina in the UNESCO's International Network as the SEAFLOWER Biosphere Reserve . In association with other planning and management instruments already in place, those regulations aim at protecting and sustaining the ecosystems and biodiversity existing within the MPA, adding into it a network of strictly protected zones in order to guarantee the use of and sustainable access to the environmental goods and services they generate .

That further to the protection and preservation of the representative areas as a result of its biodiversity, the zoning and its general regulatory framework of uses also facilitate the protection of other areas with high preservation values, by assigning protection areas to a wide range of habitats including coral formations, marine phanerogam seagrass and mangrove ecosystems, as well as those habitats which are relevant to endangered species or those in risk of extinction (such as spiny lobster, queen conch, octopus, snapper, grouper, among others), or other special or unique places .

That the MPA will be administered and managed as an area of multiple uses which implies that, while strengthening the preservation activities, it permits the creation and continuance of productive activities, including recreational, commercial, investigative and environmental education activities, as well as those activities traditionally carried out by the local communities .

That the administration and management of the MPA will allow ensuring the achievement of the goals in mind when establishing, designing and administering such area, and those central elements to be taken into account in this process include: a) Protection of species: protecting the biodiversity and the species of particular interest, including lobsters, marine turtles, sharks, parrot fishes, sea cucumbers, corals (Acropora spp, Porites spp, Dendrogyra *spp*), mangroves, marine phanerogams

and algae, among others; b) Habitat protection: protecting representative habitats and those critical for the survival of species of particular interest and for the functioning of the ecosystems, taking into account the ecological connections existing among them; c) Dispute resolution: removing or minimising incompatible uses and conflicts among users; d) Recovery: allow the regeneration of benthic communities, fish populations and other marine species, degraded and/or overexploited; e) Socio-economic impacts: minimising the adverse socio-economic impacts; f) Sustainable use: ensure the sustainability of the use of resources; g) Equity and possession: guarantee the equitable distribution of the economic and social benefits and protect the traditional rights; h) Implementation: facilitate the delimitation, compliance with and monitoring of the adopted measures .

That the internal zoning of the MPA and the general regulatory framework of uses arising from it expressly recognise the rights and interests of the communities traditionally located in the area, facilitating the implementation of activities for the traditional use of the marine and coastal resources in accordance with the customs and traditions of the inhabitants .

That the contribution of the scientific research for the management and better knowledge of the MPA is recognised in the zoning and its general regulatory framework of uses, and for such purposes, specific areas within each zone are assigned in order to allow better information and knowledge as required both for the monitoring of the Management Plan to be developed and for verifying the efficiency and effectivity of the established zoning .

That the zoning and general regulatory framework of uses for the MPA are built having in mind other instruments of planning, orderly management and territorial development previously established by entities with functions and competencies in the area, and it proposes a unique, consistent and simplified scheme for the management and administering of the whole MPA .

That the zoning and general regulatory framework of uses establish the purposes for the use and the access mechanisms in each zone, therefore no longer requiring special permits, as well

as the type of uses and access to certain zones which do require authorisation and permits issued the competent authority . In general, in the General Use Zones a larger number of activities with less restrictions are allowed fundamentally aiming at protecting the water quality of the ecosystems, while the Preservation Zones (no extraction or access), are the more restrictive .

That the zoning will be defined under the following categories:

1. **General Use Zone**

2. **Special Use Zone**

3. **Zone for Recovery and Sustainable use of Hydro-Biological Resources**

4. **Conservation Zone (No Take)**

5. **Preservation Zone (No Entry)**

The zoning foresees the possibility of defining or delimiting other types of specific areas within the areas already zoned and identified .

Additionally, the zoning foresees the possibility of establishing additional measures on the use and access to certain areas with the purpose of being able to carry out activities which, for exceptional reasons, were not foreseen under the regulatory framework for general uses in each zone or area described in the above numbers, such as, security concerns, emergencies, placing of navigation facilities, defence operations and the exercise of traditional practices and customs by the native communities of the archipelago .

That for each area described above, a regulatory framework of uses is established and it shall guide the exercise of the permitted, restricted and prohibited activities in each zone or in part of them, the creation of areas within the MPA zones, and the producers to be followed by all users in order to obtain the required permits for using and accessing each zone in accordance with what was established in the zoning .

That the general regulatory framework of uses becomes a decisive parameter for the exercise of functions and competences of those entities with jurisdiction within the MPA area, and therefore it must be comprised within their respective planning and investment mechanisms .

That pursuant to Agreement 021 of the Board of Directors of CORALINA dated 9 June 2005, the Marine Protected Area of the SEAFLOWER Biosphere Reserve was approved, internally delimited and divided in three sectors Northern, Central and Southern .

That it is the responsibility of the Board of Directors of CORALINA to adopt the zoning and general regulatory framework of uses of the Marine Protected Area and for the foregoing reasons,

Agrees

First Article: Zoning each one of the sectors of the Marine Protected Area of the *SEAFLOWER* Biosphere Reserve, as declared by the Ministry of Environment, Housing and Territorial Development pursuant to Resolution 0107 of 2005; internally delimited by means of Agreement of the Board of Directors of Coralina number 021 dated 9 June 2005 and cartographically represented in the maps annexed to the present Agreement and which are an integral part of it .

The zoning corresponds to a subdivision with purposes of preservation and management of the different areas contained within the MPA, and is planned and determined in accordance with the natural, politico-administrative, legal and socio-economical characteristics of each area, for its orderly management . The zoning to be defined below implies different degrees of protection that are to be regulated through special measures in order to guarantee its comprehensive management, having into account the particular circumstances of the area with regard to is potentials, restrictions, alterations, degradation and use pressures .

The zoning to be adopted is as follows:

1. General Use Zone: Unity for the sustainable management applicable to those areas which contain ecosystems with a high offer of environmental goods and services, hence permitting to take advantage of them in a sustainable manner without introducing significant modifications to the natural surroundings of the area, in order to produce a sustainable development model and use the natural resources for the benefit of the region, while being compatible with the preservation objectives of the MPA .

In this zone recreational low-impact activities, sustainable aquaculture, subsistence fishing, sustainable artisanal and industrial fishing, ecotourism, among other, are to be allowed .

2. Special Use Zone: Unity for the sustainable management applicable to those areas in which it is necessary to implement specific management measures, such as controlling the access or the types of activities to be allowed in sectors with a high intensity of use, with the aim of protecting the natural resources; establishing thresholds for recovering over-exploited species or guaranteeing the public safety in case of contingencies .

This type of zones can be established with a temporary or permanent character depending on the way in which they are defined by means of the regulatory framework of uses for the MPA . The environmental authority will establish this type of zones and its particular regulation, based on the regulatory framework currently in force, in order to deal with situations that demand immediate intervention .

In this zones the degree of human intervention will be limited to activities such as, *inter alia*: research, monitoring, environmental education, ecotourism, low-impact recreation, anchoring, access channel and sustainable fishing .

3. Zone of Recovery and Sustainable Use of Hydro-biological Resources: Unity for the preservation and

sustainable management applicable to those zones within the marine protected area which, due to natural causes or as a result of human intervention, have suffered considerable damages and demand special management in order to recover its quality and environmental stability .

In this zone activities for the recovery and/or restoration of ecosystems, traditional regulated artisanal fishing, scientific research, environmental education, artisanal and sport fishing guided by artisanal traditional fishermen will be allowed .

Conservation Zone (No Take): Unity for the conservation and sustainable management applicable to those areas whose main purpose will be the protection of biodiversity, including ecosystems which are vital to its sustainable development .This zone also includes those zones declared as natural regional parks and those to be declared as such in the future .

In this zone only activities of research, ecological recovery and/or restoration of degraded ecosystems, monitoring, environmental education, ecotourism and low-impact recreation are allowed .

Preservation Zone (No entry): Unity for the conservation and sustainable management applicable to those areas whose existence is critical and fundamental for the protection and conservation of biodiversity, including marine communities and ecological processes highly representative of the MPA, as well as ecosystems which are vital to its sustainable development .

The purpose of its establishment is creating areas within the MPA destined to the strictest conservation of ecosystems and/or essential habitats in order to guarantee the comprehensiveness of the ecosystems and the natural values of the marine protected area, keeping them free from anthropic extractive interferences .

In this zone only activities of scientific research and monitoring, after obtaining the required authorisation from the competent authorities, are allowed .

Second Article: In order to achieve the mission and objectives of the MPA, and the objectives of the zoning, the following regulatory frameworks on uses for each zone are established and they include the description of allowed activities, the prohibitions, the use and/or access without permit and the use/access with permit:

1. General Use Zone:

In this zone recreational activities of low-impact, sustainable aquaculture, subsistence fishing, sustainable artisanal fishing, ecotourism, maritime transportation, among other, are allowed .

A. Prohibitions.

a) In the Central and Southern sectors of the MPA no industrial fishing activities will be allowed . in the Northern sector of the MPA, the Regional Fishing and Aquaculture Council, in coordination with the Environmental Authority of the MPA/CORALINA and the maritime authority, after hearing the opinion of different interest groups such as well as artisanal fishermen, industrial fishermen, among others, shall establish and regulate the zones of special use destined to industrial sustainable fishing activities which are allowed in the Northern sector .

Paragraph: after the entry into force of the present Agreement, there will be a time-limit of one (1) year for establishing and regulating industrial sustainable fishing in the Northern sector of the MPA .

B. Use and/or access without permits.

The following activities can be carried in the General Use Zones without the need for permits or authorizations:

a) Low-impact activities, including recreational activities .

b) Subsistence fishing .
c) National scientific and/or technologic research which do not imply taking samples of biodiversity including non-renewable natural resources, taking into account what was established in Decree 309 of 2000 or the law that modifies or replaces it, Convention on Biological Diversity - CBD- approved by means of Law 165 of 1994 and regulations in force on access to genetic resources .
d) Traditional uses of marine resources by local communities only when those are allowed within the zone or based on agreements duly signed and regulated by the environmental authority .
e) Non-profit photography and filming .
f) Non-profit educational programs .

C. Use and/or access with permit.

In order to carry out or develop any of the following activities, it is necessary to process and obtain the corresponding permit or authorisation from the competent authority:

a) Extracting or collecting Marine resources associated to activities different to those allowed under letter A, for any type of activity expected to be developed .
b) Artisanal or industrial fishing in any form .
c) Industrial fishing in the case of the exception described for the northern zone .
d) Aquaculture or mariculture projects when the national or regional environmental regulations so prescribe (subsidiary rigour- agreement of the Board of Directors and approval from the Ministry - transitory validity) .
e) Tourism projects and operating touristic services when so required by the national and regional environmental regulations .
f) Scientific and/or technological research in accordance with the regulations on this matter .
g) Traditional uses of marine natural resources when those are not covered by what is established in paragraph B - d), described in the previous section .
h) Development and/or refurbishment and/or adaptation and/or operation of infrastructure projects compatible to the preservation objectives established for the MPA and for the General Use Zones, including:

- Facilities for unloading or discharge of any type of waste both liquid or solid .
- Construction, maintenance, adaptation and operation of ports and/or port facilities .
- Construction, maintenance or demolition of any type of infrastructure project which can cause environmental adverse effects in the MPA .

i) Developing projects or activities compatible with the conservation objectives assigned to the MPA and to the General Use Zones, including:

- Dredging .
- Discharge of solid and liquid waste (dangerous or not) from any source (movable, fixed or diffused from land or sea) .
- Works for protecting the beaches or areas under risk due to natural hazards .

j) Any other activity which is compatible to the general conservation and sustainable use objectives for the MPA and for the General Use Zones not mentioned or described in section B .

2. Special Use Zones

In this zone the degree of human intervention will be limited to activities such as: research, monitoring, environmental education, ecotourism, low-impact recreation, anchoring, access channel, sustainable fishing, among others .

The general and specific regulations for using this type of zone will be defined within one (1) year, since the entry into force of this Agreement, and will likewise require approval from the Board of Directors . The Corporation in its capacity as Environmental and Administrative Authority of the MPA will work co-ordinately with different organizations and interest groups in establishing it .

Pending the issuance of general and specific regulations on uses in these zones, the regulation established for the general use zones with regard to prohibitions and forms (permits and authorizations) required for accessing, using and taking

sustainable advantage of the ecosystems will transitorily apply .

3. Zone of Recovery and Sustainable Use of Hydro-biological Resources.

In this zone it is allowed to carry out activities of recovery and/or restoration of ecosystems, traditional artisanal fishing duly regulated, scientific research, environmental education, traditional artisanal fishing and sport fishing guided by traditional artisanal fishermen .

A. Prohibitions:

a) Industrial fishing is prohibited .
b) Recreational and commercial fishing which imply extraction of natural renewable resources is not allowed, except for subsistence fishing, traditional artisanal fishing duly regulated, artisanal and sport fishing guided by traditional artisanal fishermen .
c) Jet propulsion vessel for personal use are not allowed .

B. Uses and/or access without permits.

a) Low-impact activities, including recreational ones, which do not involve extraction of natural resources or marine products .
b) Subsistence fishing .
c) Traditional uses of marine resources carried out by local communities when they are authorised within the zone or are based on agreements duly signed and regulated by the environmental authority .
d) Non-profit photographing and filming .
e) Non-profit educational programs .

C. Use and/or access with permits.

a) Artisanal traditional fishing is allowed, but subject to the terms established by the Regional Board of Fishing and Aquaculture in accordance with the existing regulations on fisheries management . All regulations currently in force with regard to the San Andrés Archipelago will remain in force, including but not limited to, quotas and restrictions on the use of fishing arts (harpoon and other restricted methods) .
b) Sport fishing .
c) Research, monitoring and education .
d) Navigation by fishing vessels, in which case all equipment used to carry out their activities should be stored and secured when the vessel is in transit to another authorised fishing zone within the MPA or on the way to the disembark port .
e) Small scale aquaculture and mariculture projects carried out by traditional artisanal fishermen legally recognised to do so .
f) Use of fish aggregation systems (FADs) is only allowed with previous authorisation and approval from the Administrative Authority for the MPA/CORALINA and the Regional Board on Fishing and Aquaculture .
g) Photographing and filming for profit .
h) Educational programs for profit .

4. Conservation Zone (no take):

In this zone it is only allowed to carry out activities of research, recovery and or ecological restoration of degraded ecosystems, monitoring, environmental education, ecotourism and low-impact recreation .

A. Prohibitions

a) Recreational and commercial activities which imply extraction of renewable and non-renewable natural resources are not allowed .

b) Jet propulsion vessel for personal use are not allowed .

B. Use and/or access without permits.

a) Low-impact activities, including recreational ones, which do not involve extraction of natural resources and marine products .
b) Traditional uses of marine resources carried out by local communities when they are authorised within the zone or are based on agreements duly signed and regulated by the environmental authority .
c) Non-profit photographing and filming .
d) Non-profit educational programs .

C. Use and/or access with permits.
a) Research, monitoring and education .
b) Navigation by fishing vessels, in which case all equipment used to carry out their activities should be stored and secured when the vessel is in transit to another authorised fishing zone within the MPA or on the way to the disembark port .
c) Traditional artisanal fishermen legally recognised to carry out small scale aquaculture and mariculture projects .
d) Use of systems for aggregation of fish (FADs) is only allowed with previous authorisation and approval from the Administrative Authority for the MPA / CORALINA and the Regional Board on Fishing and Aquaculture .
e) Photographing and filming for profit .
f) Educational programs for profit .

5. Preservation Zone (no entry).

In this zone only activities of scientific research and monitoring, after obtaining the required authorisation form the competent authorities, are allowed .

A. Prohibitions

The following activities, which can cause the alteration of the natural surroundings of these zones, are prohibited:

a) Discharge, introduction, distribution, use or abandonment of toxic or pollutant substances .
b) Use of any chemical product with residual or explosive effects, except when they are to be used in an authorised construction site .

c) Any extracting activity, except when authorised by CORALINA for technical or scientific motives .
d) Any activity defined by CORALINA as causing significant modifications to the environment or to the natural values in the different areas .
e) Carrying out any fishing activity, except for fishing for scientific research purposes authorised by CORALINA, and subsistence fishing in zones where such activity is allowed, having regard to the natural and social conditions, provided the authorised activity does not affect the ecological stability of those sectors where it is permissible .
f) Colleting samples of any flora or fauna product, except when CORALINA so authorises for research and special investigative purposes .
g) Carrying, using or possessing flammable substances which have not been duly authorised, as well as explosive substances .
h) Discharging or dumping trash, waste or residues .
i) Producing noises or using instruments and sound equipment which affect the natural environment .
j) Altering, modifying or removing signs, signals, billboards and boundary stones .

B. Use and/or access without permits.

a) All activities to be carried out in these zones require authorisation by the competent authority and can only be developed if they do not cause modifications to the natural environment .
b) Transit of vessels .

C. Use and/or access with permits.

Persons who use these areas can remain there only for the time specified in the respective authorisation . For any finality users need to obtain the corresponding authorisation in due course and in accordance with the purpose of their visit and must comply with the remaining requirements indicated in the respective authorisation .

A permit is required to develop the following activities:

a) Carry out research and/or scientific and/or technological analysis .

Third Article: Each permit or authorisation required to carry out the activities described in each zone shall be obtained from the competent authorities and shall be subject to the rules and regulations established for such purpose .In any case, the entities in charge of managing those procedures shall take into account the regulations contained in the present Agreement, in order to contribute to achieving the goals of conservation, sustainable use and comprehensive management of the MPA .

Fourth Article: CORALINA shall perform all necessary arrangements before the Maritime Authority for establishing and regulating navigational routes within the MPA and for all other activities within its jurisdiction, especially those related to posting signs and designing anchoring and/or mooring zones .

Fifth Article: In all the zones referred-to in the present administrative act, it is prohibited to:

a . Damaging, affecting or altering in any form, the coral reefs, mangrove ecosystems, marine phanerogams, beaches, dunes and or environmental systems present therein .
b . Extracting, mobilizing, transporting, selling and/or commercializing elements and/or products which are part of environmental systems such as coral reefs, mangroves, marine phanerogams, beaches, dunes and all related components and products without due authorisation from the environmental authority .
c . Anchoring on top of coral reefs .
d . Operating or anchoring vessels in a way which damages or could damage coral reefs, mangroves, marine phanerogams, the marine seabed or any other part of the MPA .
e . Discharging or unloading any type of substance from land, sea or air without due authorisation .
f . Dredging, drilling, depositing, installing, fixing or separating structures or any other alteration to the marine seabed without authorisation, including among these, any activity for

operating fishing aggregation devices (artificial reefs, etc .) (FADs), aquaculture and using research equipment .
g . Extracting, destroying, moving, possessing, selling or commercializing components of historical or cultural heritage without authorisation from the competent authority .
h . Introducing or releasing exotic fauna and/or flora species or repopulating with native species without authorisation .
i . Developing aquaculture or mariculture activities without proper authorisation from the Regional Fishing and Aquiculture Board and the Administrative Authority of the MPA/CORALINA .
j . Destroying, removing or in any other way altering buoys, signals and scientific equipment .
k . Extracting, damaging, altering, selling, commercializing or possessing any species, or its parts or products, regulated or protected by means of international, national or local measures; including marine species defined as endangered or at risk of extinction .
l . Using explosives and other fishing arts legally prohibited .
m . Introducing or releasing hazardous substances, including poisons and chemical agents used for fishing activities in any modality .
n . Collecting eggs or altering nests of any animal species in the beach, mangroves, cays, coastal areas and marine waters .
o . Carrying out research projects and or monitoring, without due authorisation from the competent Authorities .

Sixth Article: CORALINA shall develop and/or adjust and adopt, within six (6) months from the date in which this Agreement enters into force, the Management Plans for each Regional Park included within the MPA, having into account the fundamental features set forth in the present Agreement .

Seventh Article: CORALINA shall give due publicity to the provisions of this Agreement and raise awareness within the community at large . A copy of this Agreement shall be communicated to the competent authorities for what falls within their jurisdiction, and in any case it shall be published in widely-distributed regional media and in the Website of such Corporation .

Eight Article: The zoning and regulation established herein shall be reviewed every three (3) years .

Ninth Article: Non-compliance with the provisions contained in the present Agreement shall give rise to the preventive measures and sanctions provided for in Law 99 of 1993 or the modifying or substituting legislation .

Tenth Article: The present Agreement enters into force on the date of its publication in the Official Journal .

Be it communicated, published and complied with .

Issued in San Andrés Island, on

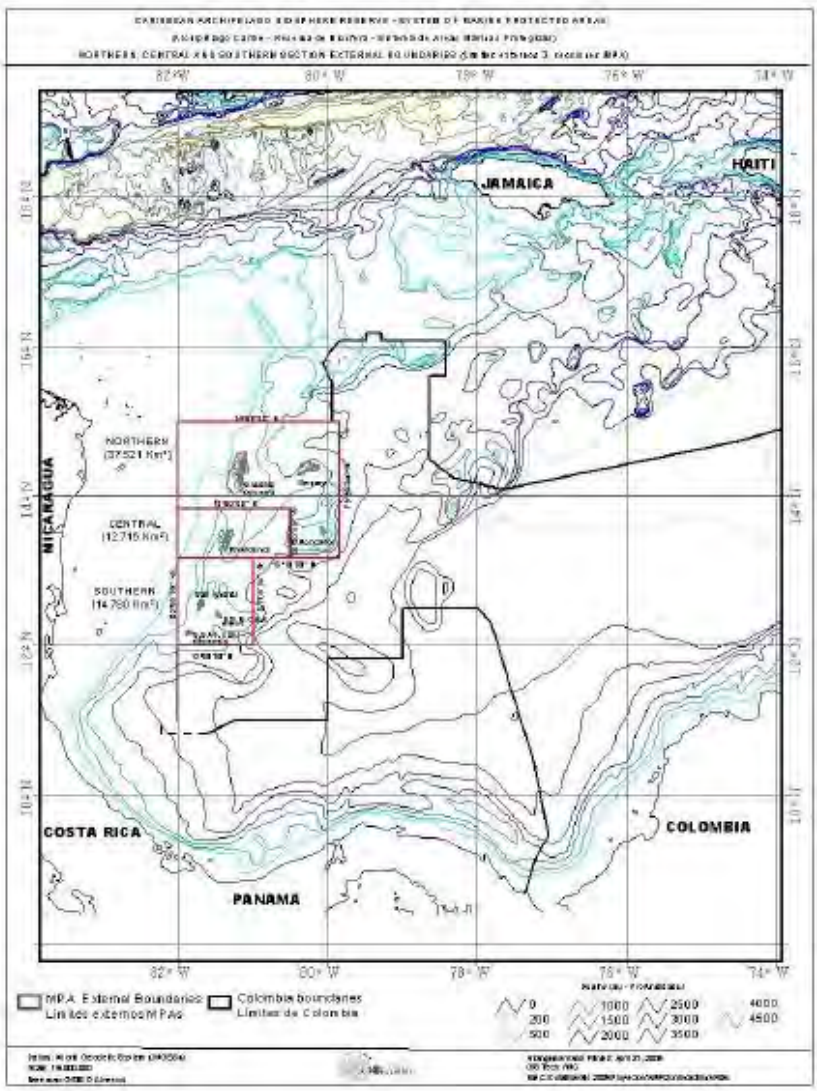
04 August 2005

[*Signed*]
Susanie Davis Bryan
President

[*Signed*]
Edith Carreño Corpus
Secretary

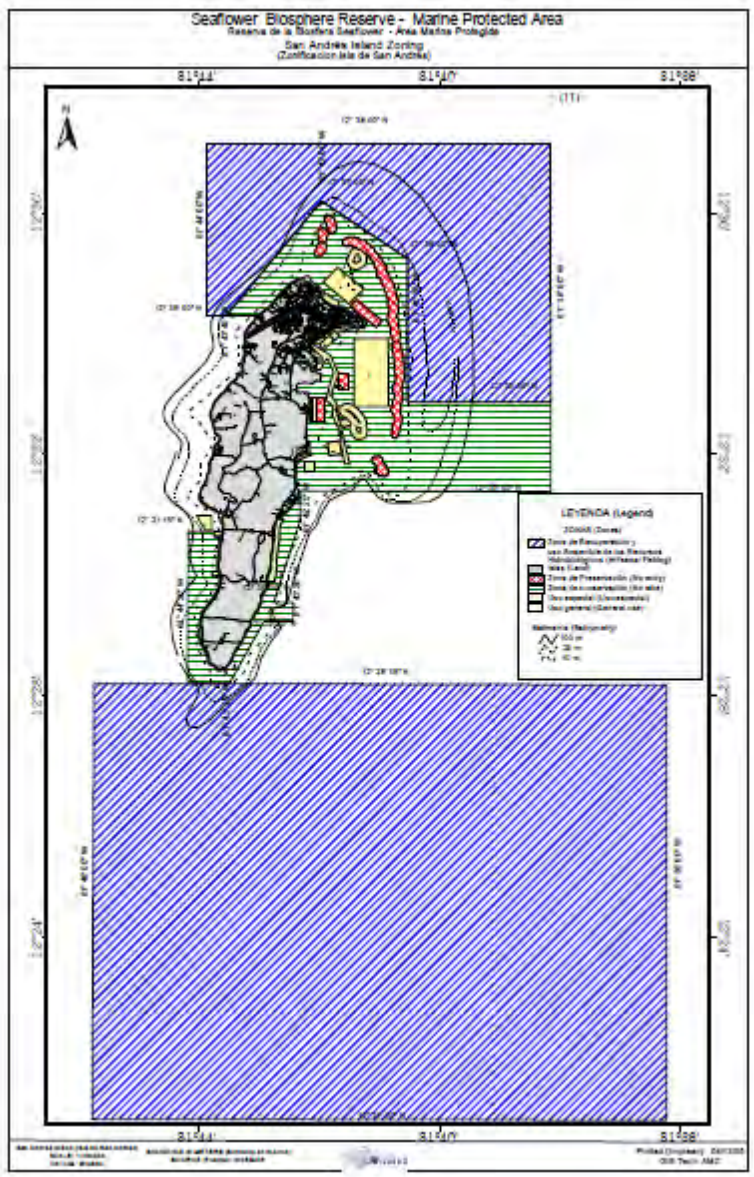
Annex No. 1

Sketch-Map. No. 1 Delimitation and zoning MPA



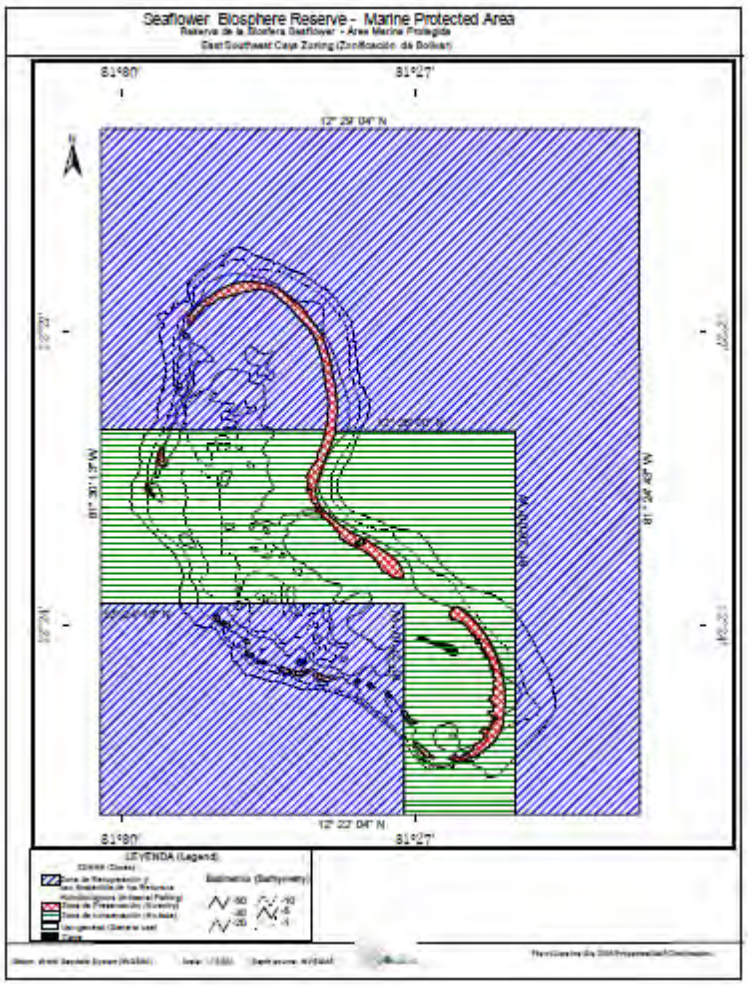
Annex No. 2

Sketch-Map. No. 2 Zoning – reef complex of San Andrés



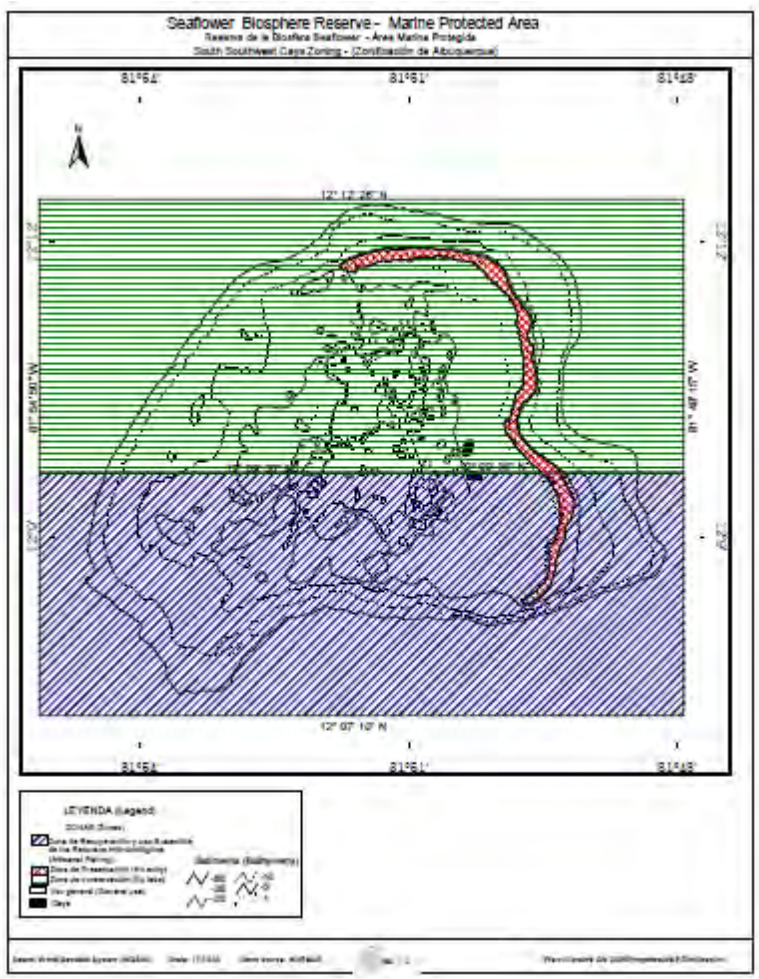
Annex No. 3

Sketch-Map. No. 3 Zoning – reef complex of Bolívar



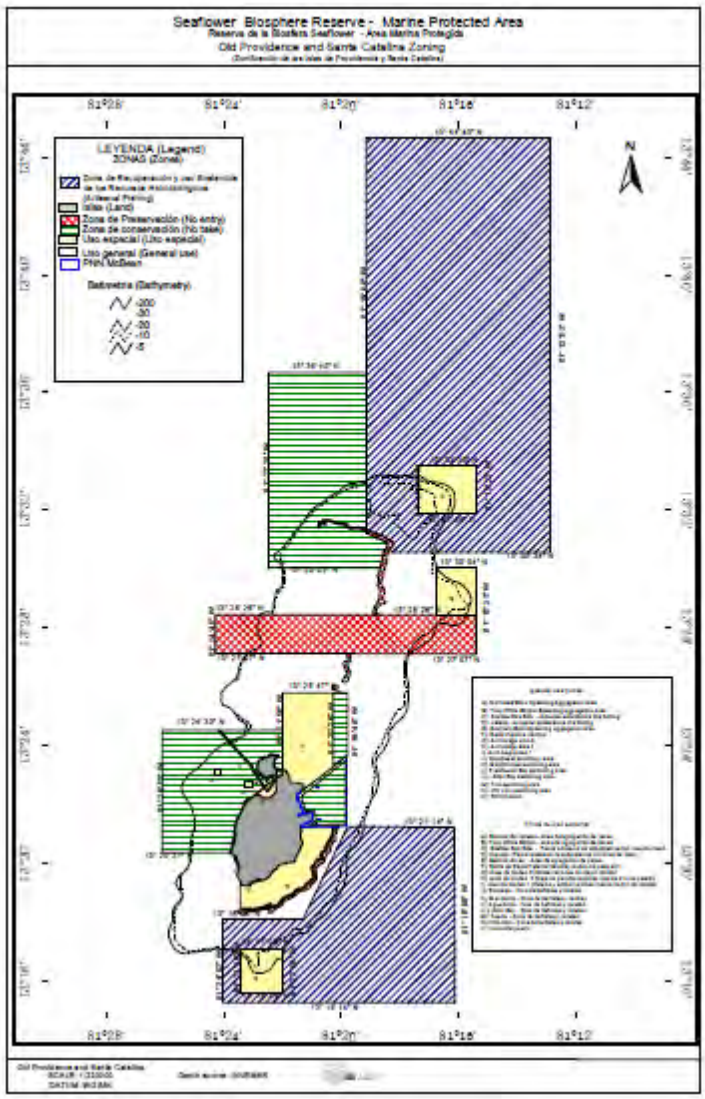
Annex No. 4

Sketch-Map. No. 4 Zoning – reef complex of Albuquerque



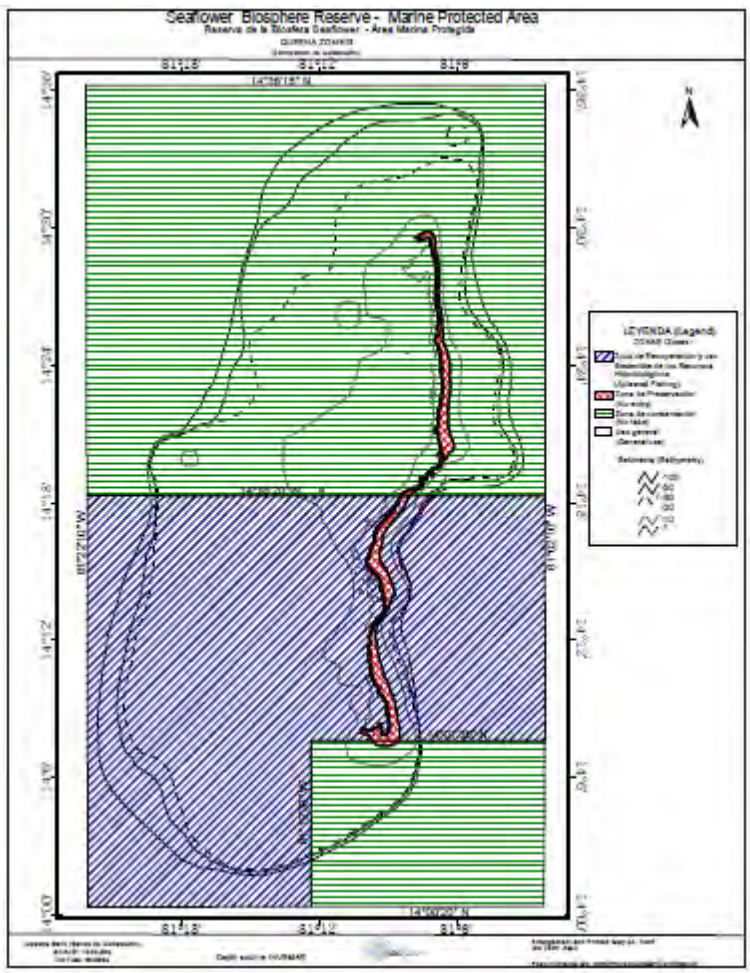
Annex No. 5

Sketch-Map. No. 5 Zoning – reef complex of Providencia



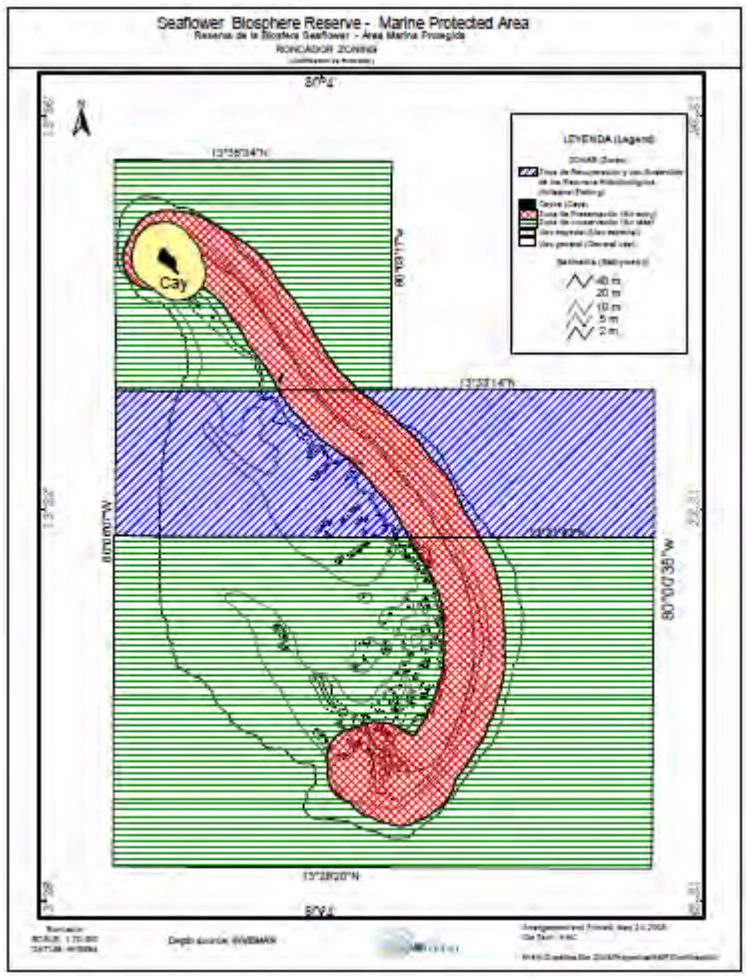
Annex No. 6

Sketch-Map. No. 6 Zoning – reef complex of Quitasueño



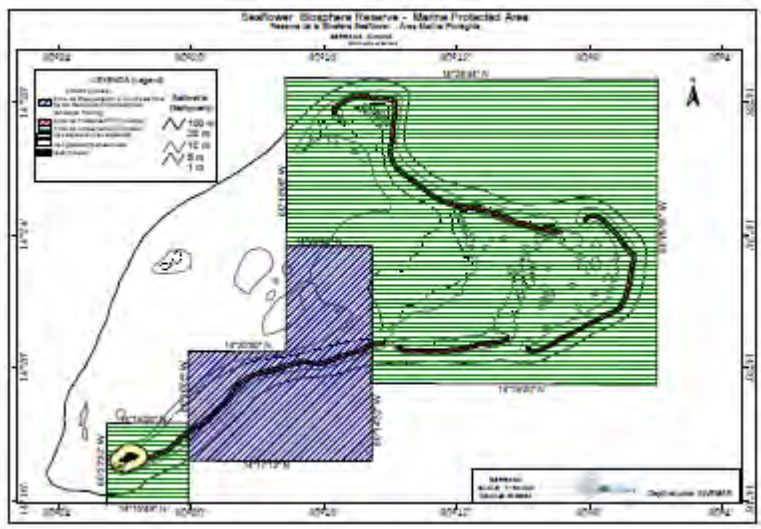
Annex No. 7

Sketch-Map. No. 7 Zoning – reef complex of Roncador



Annex No. 8

Sketch-Map. No. 8 Zoning – reef complex of Serrana



Annex 7

REPUBLIC OF COLOMBIA, POLITICAL CONSTITUTION 1991, ARTICLE 310

(National Archives of Colombia)

REPUBLIC OF COLOMBIA
POLITICAL CONSTITUTION
1991

Article 310

In addition to the provisions in the Constitution and the laws applicable to other departments, the Archipelago Department of San Andrés, Providencia and Santa Catalina will be governed by special norms which will be enacted by the legislature concerning administrative, immigration, taxation, foreign trade, exchange, financial and economic development matters .

By means of a law approved by the majority of the members of each chamber, it shall be possible to limit the exercise of the rights of movement and residence, establish controls on the density of population, regulate the use of the land, and submit to special conditions the transfer of immovable property in order to protect the cultural identity of the native communities and preserve the environment and natural resources of the Archipelago .

Through the creation of the municipalities that may be necessary, the Departmental Assembly shall guarantee the institutional expression of the raizal communities of San Andrés . The municipality of Providencia shall have a share of no less than twenty percent (20%) of the total value of departmental revenues .

Annex 8

PRESIDENTIAL DECREE NUMBER 2762 OF 13 DECEMBER 1991, EXCERPTS FROM THE REASONING SECTION AND ARTICLE 1

(National Archives of Colombia)

PRESIDENTIAL DECREE NUMBER 2762 OF 1991

(13 December)

Whereby measures are adopted to control the population density in the Archipelago Department of San Andrés, Providencia and Santa Catalina

The President of the Republic of Colombia in use of the faculties granted to him by Transitory Article 42, of the Political Constitution of Colombia, under previous consideration and non-disapproval by the Special Commission, and

Considering

That the Archipelago Department of San Andrés, Providencia and Santa Catalina presents a high index of demographic density which has made the development of the human communities on the Islands difficult .

That the natural and environmental resources of the Archipelago are endangered making it necessary to make immediate measures to avoid irreversible damages in the ecosystem;

That the accelerated migratory process to the department Archipelago of San Andres, Providence and Santa Catalina, is the principal cause of its population growth, making it necessary to adopt measures to regulate the right of circulation and residency of the insular territory;

(…)

Decrees:

Article l. The present Decree has the objective of limiting and regulating the rights of circulation and residency in the Archipelago Department of San Andrés, Providencia and Santa Catalina, in procuring the purposes expressed in Article 310 of the Political Constitution .

(…)

Annex 9

LAW 47 OF 19 FEBRUARY 1993, ARTICLES 1 AND 4

(Official Journal No. 40.763, 23 February 1993)

LAW 47 OF 1993

Whereby special rules are laid down for the organisation and operation of the Archipelago Department of San Andrés, Providencia and Santa Catalina.

The Congress of Colombia

Decrees

Chapter I
General Provisions

Article 1. Object of the Law. The object of this Law is to provide the Archipelago Department of San Andrés, Providencia and Santa Catalina with a special statute that permits its development within the framework established by the Constitution, in accordance with its geographical, cultural, social and economic conditions .

(…)

Article 4. Functions. The functions of the Archipelago Department of San Andrés, Providencia and Santa Catalina shall be the following:

(…)

(d) To exercise special functions established by the Law in matters of administration, immigration, control of population density, regulation of land use, transfer of real estate, preservation of the environment, fiscal management, foreign trade, exchange and financial and economic development .

(…)

Annex 10

NATIONAL NAVY OF COLOMBIA, SELECTED ENTRIES IN THE *REPORT BOOK ON MOTOR VESSELS, ADVANCED NAVY DETACHMENT # 22 "RONCADOR",* OPENED ON 29 NOVEMBER 2010[*]

(Archives of the Colombian Ministry of Defense)

[*] The full text of the Report Book comprises around 200 pages. Only the original of those entries translated and presented as Annex 10 are included herein. The remainder part of the book is available upon request.

ARMED FORCES OF COLOMBIA

NATIONAL NAVY

[*Emblem*]

NATIONAL NAVY
REPUBLIC OF COLOMBIA

ADVANCED NAVY DETACHMENT # 22
"RONCADOR"

CONTENTS

REPORT BOOK ON MOTOR VESSELS

ARMED FORCES OF COLOMBIA

NATIONAL NAVY

[*Emblem*]

BATTALION OF THE MILITARY NAVAL POLICE No . 1

OPENING RECORD

IN ACCORDANCE WITH THE LEGAL PROVISIONS AND REGULATIONS IN FORCE, THE PRESENT FOLDER IS OPENED AS IS DESTINED AS:

BOOK OF INSPECTION OF MOTOR VESSELS PNA 22

RONCADOR

OPENED ON THE 29 OF November OF 2010 .

CLOSED ON THE ___OF _____ OF _____ .

[*Signed*]

DATE	TIME	SUBJECT	ENTRY
26 November 2012		Motor Vessel	UNDER PRESURE
		Captain	Hoddson, Ernesto
			I D . № . 12 .530 .024
		Flag	Colombian
		ID number	Pending
		Sail	From November 25, 2012 to December 10, 2012
		Crew	07
		Fuel	350 gallons
			Artisanal Fishing
		Sail	116717

DATE	TIME	SUBJECT	ENTRY
29 November 2012		Motor Vessel	PESPROISLAS
		Captain	Santiago Taylor I.D. N. 15.244.135
		Flag	Colombian
		ID number	Pending
		Sail	F01 – M04 – CP12
		Crew	05 A/B
		Fuel	125 Gallons
		Fisheries	Artisanal
		Sail	F01 – M04 – CP12
		Beginning of the fishing operation	28 November 2012
		End of the fishing operation	13 November 2012

DATE	TIME	SUBJECT	ENTRY
December 4, 2012	07:00 A .M .	Motor Vessel	CAROLINE
[Signature]	[Signature]	Captain	Edgar Jay I D .# 18 .001 .716
		Flag	Colombian
		Plate Number	CP71165 – B
		Sail	267555
		Crew	03
		Fuel	240 ACPM 40 Gasoline
		Fisheries	Artisanal
		Beginning of the fishing operation	November 27, 2012
		End of the fishing operation	December 12, 2012

DATE	TIME	SUBJECT	ENTRY
March 20, 2013	11:05	Motor Vessel	CAROLINE
		Captain	Edgar Jay
		Flag	Colombian
		Plate Number	CP71165 B
		Sail	267622
		Crew	06
		Fisheries	Artisanal
		Color	White
		Beginning of the fishing operation	March 20, 2013
		End of the fishing operation	April 04, 2013
		Fuel	280 Gallons

DATE	TIME	SUBJECT	ENTRY
August 26, 2015	11:00	Motor Vessel	WIZARD
		Captain	Alfredo Martinez Diaz
		Flag	Colombian
		Sail	CP-07-0912 N-13
		Plate Number	CP-07-1337
		Crew	04
		Fisheries	Artisanal
		Color	White
		Fuel	400 Gallons ACPM; 120 Gallons Gasoline
		Beginning of the fishing operation	August 15, 2015
		End of the fishing operation	September 15, 2015
			[Signature]
			TECIM ARENA DIEGO
			[illegible]

Annex 11

**MINISTRY OF DEFENSE, GENERAL MARITIME DIRECTION,
SAILING RECORD, MISS IDA, 14 JANUARY 2015**

(Archives of the Colombian Ministry of Defense)

REPUBLIC OF COLOMBIA

MINISTRY OF DEFENSE

[*Emblem*]

GENERAL MARITIME DIRECTION

SAILING RECORD

SAILING VESSELS UNDER 25 TONS

Considering the vessel MISS IDA of COLOMBIAN flag with carriage of 11 .03 net registered tons and 20 .06 gross registered tons under the command of Captain ALFREDO MARTÍNEZ DIAZ who sails with 08 crewmembers and carries ____ passengers, has complied with all legal and regulatory requirements .The undersigned Captain of the Port of SAN ANDRES ISLAND grants permission to leave this port today at 18:00 hours, destined to the NORTHERN ISLANDS (SERRANA, SERRANILLA, RONCADOR AND QUITASUEÑO) .

NOTE: IT IS RECALLED THAT THE COMPLIANCE WITH THE RADIO REPORT VIA VHF CHANNEL 16 DURING DEPARTURE, TRANSIT THROUGH THE ACCESS CHANEL AND ARRIVAL TO THE ISLAND OF SAN ANDRES WITH THE COAST GUARD STATION IS REQUIRED .

Place and date

SAN ANDRÉS ISLANDS . 14 JANUARY 2015

[Stamp and signature]
FC DARIO SANABRIA GAITAN .
Port Captain

[Stamps and seals]
No . 323815

Annex 12

**MINISTRY OF DEFENSE, GENERAL MARITIME DIRECTION,
SAILING RECORD, EQUIVEL, 17 FEBRUARY 2015**

(Archives of the Colombian Ministry of Defense)

REPUBLIC OF COLOMBIA

MINISTRY OF DEFENSE

[*Emblem*]

GENERAL MARITIME DIRECTION

SAILING RECORD

SAILING VESSELS UNDER 25 TONS

Considering the vessel EQUIVEL of COLOMBIAN flag with carriage of 11,02 net registered tons and 13,36 gross registered tons under the command of Captain PEDRO LIVINGSTON HOWARD who sails with 4 crewmembers and carries 0 passengers, has complied with all legal and regulatory requirements . The undersigned Captain of the Port of SAN ANDRES ISLAND grants permission to leave this port today at 12:00 hours, destined to the NORTHERN CAYS .

Place and date
SAN ANDRÉS ISLANDS . 17 FEBRUARY 2015

[Stamp and signature]
FC DARIO E .SANABRIA GAITAN .
Port Captain

[Stamps and seals]
No . 328723

Annex 13

**MINISTRY OF DEFENSE, GENERAL MARITIME DIRECTION,
SAILING RECORD, GENESIS III, 17 OCTOBER 2015**

(Archives of the Colombian Ministry of Defense)

REPUBLIC OF COLOMBIA

MINISTRY OF DEFENSE

[*Emblem*]

GENERAL MARITIME DIRECTION

AUTHORISED TO UP TO 200 RT

SAILING RECORD

SAILING VESSELS UNDER 25 TONS

Considering the vessel GENESIS III of COLOMBIAN flag with carriage of 11 .07 net registered tons and 12 .52 gross registered tons under the command of Captain RAFAEL LAMBIS LOPEZ who sails with 4 crewmembers and carries NO passengers, has complied with all legal and regulatory requirements . The undersigned Captain of the Port of SAN ANDRES ISLAND grants permission to leave this port today at 18:00 hours, destined to the QUITASUEÑO, RONCADOR, SERRANA .

Place and date

SAN ANDRÉS ISLANDS . 17 OCTOBER 2015

[Stamp and signature]
FC DARIO EDUARDO SANABRIA GAITAN .
Port Captain

[Stamps and seals]
No .298249

Annex 14

MINISTRY OF DEFENSE, GENERAL MARITIME DIRECTION, SAILING RECORD, MISS SUSETH, 15 FEBRUARY 2016

(Archives of the Colombian Ministry of Defense)

REPUBLIC OF COLOMBIA

MINISTRY OF DEFENSE

[*Emblem*]

GENERAL MARITIME DIRECTION

SAILING RECORD

SAILING VESSELS UP TO 200 TONS

Considering the vessel MISS SUSETH of COLOMBIAN flag with carriage of 15 .97 net registered tons and 24 .88 gross registered tons under the command of Captain LUIS EMILIO GARCIA who sails with 01 crewmembers and carries 06 FISHERMEN passengers, has complied with all legal and regulatory requirements . The undersigned Captain of the Port of SAN ANDRES ISLAND grants permission to leave this port today at 08:00 hours, destined to the NORTHERN CAYS (SERRANA, SERRANILLA, RONCADOR) .

Place and date
SAN ANDRÉS ISLANDS . 15 FEBRUARY 2016

[Signature]
Frigate Captain DARIO EDUARDO SANABRIA GAITAN .

Port Captain

[Stamps and seals]
No .207420

Annex 15

MINISTRY OF DEFENSE, GENERAL MARITIME DIRECTION, SAILING RECORD, MAR AZUL, 19 SEPTEMBER 2016

(Archives of the Colombian Ministry of Defense)

REPUBLIC OF COLOMBIA

MINISTRY OF DEFENSE

[*Emblem*]

GENERAL MARITIME DIRECTION

SAILING RECORD

SAILING VESSELS UP TO 200 TONS

Considering the vessel MAR AZUL of COLOMBIAN flag with carriage of 15 .00 net registered tons and 25 .00 gross registered tons under the command of Captain JOSE BAENA PACHECO who sails with 13 crewmembers and carries NO passengers, has complied with all legal and regulatory requirements .The undersigned Captain of the Port of SAN ANDRES ISLAND grants permission to leave this port today at 18:00 hours, destined to the NORTHERN ISLANDS .

Place and date

SAN ANDRÉS ISLANDS . 19 SEPTEMBER 2016

[Signature]
FC DARIO EDUARDO SANABRIA GAITAN .
Port Captain

[Stamps and seals]
No .157205

Annex 16

COLOMBIAN OCEAN COMMISSION, *CONTRIBUTION TO THE KNOWLEDGE OF THE SEAFLOWER BIOSPHERE RESERVE*, *EXCERPTS*, BOGOTÁ, 2015

(Archives of the Colombian Ocean Commission)

COLOMBIAN OCEAN COMMISSION

CONTRIBUTIONS TO THE KNOWLEDGE OF THE SEAFLOWER BIOSPHERE RESERVE

Bogotá, 2015

Introduction

(…)

The Seaflower Biosphere Reserve houses important ecosystems such as tropical dry forest, mangrove forests, seagrass meadows or seagrass beds, soft bottoms and coralline sand beaches, which are very well preserved (Taylor et al., 2011). Likewise, it has more than 77% of the shallow coralline areas of Colombia (Invemar 2005, 2009, Coralina-Invemar 2012), the world's third biggest coral reef, deep ecosystems (including deep corals), key species, great richness and diversity of fish, corals, sponges, gorgonacea, macroalgae, queen conch, lobsters, birds, reptiles, insects, among others, which provide countless ecosystem services such as food, coastal protection, recreation, etc. (Conservation International 2008, Burke et al., 2008).

(…)

Annex 17

FISHING AGREEMENT BETWEEN THE REPUBLIC OF COLOMBIA AND JAMAICA, BOGOTÁ, 30 JULY 1981

(1295 UNTS 99)

No. 21408

COLOMBIA
and
JAMAICA

Fishing Agreement (with annex). Signed at Bogotá on 30 July 1981

Authentic texts: English and Spanish.
Registered by Colombia on 29 November 1982.

COLOMBIE
et
JAMAÏQUE

Accord relatif à la pêche (avec annexe). Signé à Bogotá le 30 juillet 1981

Textes authentiques : anglais et espagnol.
Enregistré par la Colombie le 29 novembre 1982.

FISHING AGREEMENT[1] BETWEEN JAMAICA AND THE REPUBLIC OF COLOMBIA

The Government of the Republic of Colombia and the Government of Jamaica,

Considering the traditional bonds of friendship which have existed between both countries,

Bearing in mind the common interest of both countries in the rational exploitation, the proper management and conservation of fishing resources,

Taking into account the contribution that a fisheries agreement will make to the satisfaction of the nutritional needs of the Jamaican people,

Desirous of establishing reasonable terms so that vessels under the Jamaican flag may carry out specific fishing activities in certain maritime areas of the Republic of Colombia identified in this Agreement,

Have agreed upon the following:

Article I. The Government of the Republic of Colombia shall grant fishing vessels under the Jamaican flag access to certain areas under Colombian jurisdiction and sovereignty referred to in Article II for the purpose of engaging in fishing activities under the conditions laid down in this Agreement.

Article II. Jamaican fishing vessels with the characteristics specified in Article III shall be able to undertake fishing activities in the following areas:

—The Bajo Nuevo Cay Zone: The area within the limit of 12 nautical miles, measured from the low water mark at Bajo Nuevo Cay;

—The Serranilla Cays Zone: The area within the limit of 12 nautical miles, measured from the low water mark of Serranilla Cays.

Article III. *a*) Jamaican fishing vessels shall only be able to catch species of the families listed below:

Spanish name	*Scientific name of the family*	*English name*
Meros, chernas, cabrillas	Serranidae	Groupers
Jureles	Carangindae	Jacks
Pargos	Lutjanidae	Snappers
Roncos	Pomadasydae	Grunt
Salmonetes	Mullidae	Goat-fish mullets
Peces loro	Scaridae	Parrot fishes
Peje puerco	Balistidae	Trigger fishes—filefish
Toyos	Carcharhinidae	Sharks
Macarela	Scombridae	King fish, mackerel

Provided, however, the species captured accidentally or by the catch may be disposed of by the fishermen.

b) The maximum annual catch permissible shall be the following:

—Bajo Nuevo Cay Zone: 360 metric tons per year;

—Serranilla Cays Zone: 480 metric tons per year.

[1] Came into force on 6 August 1982 by the exchange of the instruments of ratification, which took place at Bogotá, in accordance with article XIII.

c) The fishing gear to be used by the Jamaican fishermen shall be those classified as single composite line, traps, gill nets, trammel and lampara type nets light or bait. The use of fishing gear of other descriptions is prohibited.

d) The Government of Colombia shall permit no more than ten (10) vessels under the Jamaican flag to conduct fishing activities under this Agreement. These ten (10) vessels shall comprise five (5) independent fishing vessels and five (5) carrier vessels.

e) The specifications of all vessels shall not exceed the following:

1. Length: 75 feet;
2. Engines: 400 h.p.;
3. Net capacity of hold: 25 metric tons with refrigeration by ice;
   10 metric tons with automatic refrigeration.

f) Each carrier vessel assigned to a fishing zone as established in the present Agreement may have up to six (6) auxiliary boats of a maximum length twenty-eight (28) feet, powered by outboard motors of not more that forty (40) h.p., and have a crew of not more than five (5) fishermen in respect of each such boat.

g) The five (5) carrier vessels shall not operate any fishing equipment and shall be assigned in the following manner:

1. Three (3) in the Serranilla Cays Zone;
2. Two (2) in the Bajo Nuevo Cay Zone.

In a case where damage to one of [the] carrier vessels makes necessary its replacement for a long time, this carrier vessel shall be replaced by another with similar characteristics once the Jamaican Government has notified the Embassy of the Republic of Colombia in Kingston which shall authorize such replacement and communicate this to Inderena.

h) The five (5) independent fishing vessels shall be assigned in the following manner:

1. Three (3) in the Serranilla Cays Zone;
2. Two (2) in the Bajo Nuevo Cay Zone.

Article IV. Vessels under the Jamaican flag which, by virtue of this Agreement, undertake fishing expeditions in the areas under Colombian jurisdiction covered by this Agreement shall be subject to the relevant laws and regulations in force in Colombia regarding fishing, the conservation of living resources, the preservation of the environment, pollution, sanitation, navigation, and other relevant areas.

Article V. The Republic of Colombia shall permit temporary stationing of Jamaican fishermen on Serranilla and Bajo Nuevo Cays, in order to carry out fishing activities under this Agreement, subject to the following conditions:

a) They will be subject to Colombian rules, regulations, and laws;

b) All installations and works taking place within the Cays referred to must be subject to the prior approval of the Colombian Authorities;

c) It will be possible to have temporarily a maximum of 36 fishermen on Serranilla and 24 on Bajo Nuevo.

Article VI. The Government of Jamaica shall provide the Government of Colombia every three months with a general statistical information of fishing expeditions undertaken during the corresponding period. The format for the presentation of such information and the data which it ought to contain are described in Annex I.

Article VII. The representatives of the Government of Colombia shall have the right at any time to oversee the off-loading at any Jamaican port to verify the catch of the vessels authorized under this Agreement or that they have otherwise satisfied the provisions of this Agreement.

Article VIII. *a*) The Government of Jamaica in accordance with the provisions of Article III shall apply through the Embassy of the Republic of Colombia in Kingston for the appropriate permits for the vessels to be used for fishing expeditions indicating their characteristics and giving a precise account of their crew members and auxiliary boats. Such permits shall be valid for one calendar year and are renewable for a similar period.

b) Provided that the applications comply with the terms expressed in the present Agreement, the Government of Colombia through the Institute for Renewable Natural Resources and the Environment (Inderena) and Dirección General Marítima y Portuaria (Dimar) shall issue the appropriate permits, patents, and registration documents within a reasonable time.

c) The vessels should place the fishing patent in a visible place and have available the registration documents of the accompanying boats so that they may be verified at any time by the competent Colombian Authorities.

d) All fishermen as well as crew members of the above-mentioned vessels must be provided with identification cards issued by the Colombian Consulate in Kingston, with validity of twelve (12) months, and shall be renewable for a similar period.

Article IX. *a*) The fishing vessels engaged in fishing activities under this Agreement shall not be seized or detained by the Colombian Authorities unless they have breached the laws and regulations of the Republic of Colombia.

b) Any breach or offence involving Jamaican citizens or vessels referred to in this Agreement will be punishable under the laws of Colombia. However the punishment to be imposed by the Colombian Authorities on Jamaican fishermen or crew members who commit any violation of the regulations relating to fishing activities under this Agreement or regulations related to fishing or the conservation of living resources shall not include imprisonment.

c) In the event of any seizure or detention of a fishing vessel or any punishment to crew members of the said vessels or Jamaican fishermen, the Government of Colombia shall promptly notify the Government of Jamaica through the appropriate channels the facts causing the seizure or detention as well as the steps to be taken in connection with the fishermen, crew members or vessels.

d) The Colombian Authorities, upon the receipt of a reasonable surety or another appropriate guarantee, will promptly release any fishermen, crew members or vessels in its custody for any breach of the provisions concerning fishing activities contemplated in this Agreement or any other regulations governing fishing activities in Colombia.

e) The Government of Colombia will not apply in a discriminatory manner its laws and the other domestic regulations to Jamaican vessels, crew members or fishermen.

Article X. *a*) Either Party may request consultations with the other Party for the purpose of considering any question relating to the implementation of this Agreement.

b) Consultations within the terms of this Article shall begin within sixty (60) days from the date of the request for such consultations.

c) If either the Government of Jamaica or the Government of Colombia considers it desirable to modify any of the provisions of this Agreement or the annexes thereto, it may request consultations for that purpose.

d) Any such modifications, other that those relating to Article III, shall be subject to approval in accordance [with] the appropriate legal provisions required in each country and shall enter into force on the date of the exchange of the Instruments of Ratification.

e) Modifications to Article III shall enter into force on the exchange of notes by the respective Foreign Ministries.

Article XI. Nothing in this Agreement shall be considered as affecting the delimitation of the maritime spaces between the areas under the sovereignty and the national jurisdiction of each State.

Article XII. Differences arising concerning the interpretation or application of this Agreement shall be settled by the two Parties by diplomatic means or other means of peaceful settlement as recognized by international law.

Article XIII. The present Agreement shall be subject to approval in accordance with the appropriate legal procedures required in each country, and shall come into force on the date of exchange [of the] instruments of ratification.

Article XIV. The present Agreement shall remain in force for a period of two (2) years unless terminated by either Contracting Party by twelve (12) months' notice in writing. This Agreement is renewable by mutual Agreement between the two Parties.

DONE in this city of Bogotá this 30th day of July 1981, each in the English and Spanish languages, both texts being equally authoritative.

For the Government
of Jamaica:

[*Signed*]

NEVILLE GALLIMORE
Minister of State in the Ministry
of Foreign Affairs

For the Government
of Colombia:

[*Signed*]

CARLOS LEMOS SIMMONDS
Minister of Foreign Affairs

ANNEX No. 1

STATISTICAL INFORMATION

Species (name in English)	*Area of catch*	*Quantity in lbs.*	*Number of fishemen*	*Fishing method*	*Name of vessels, boats*
TOTAL					

Annex 18

FISHING AGREEMENT BETWEEN THE REPUBLIC OF COLOMBIA AND JAMAICA , BOGOTÁ, 30 AUGUST 1984

(Archives of the Colombian Ministry of Foreign Affairs)

FISHING AGREEMENT BETWEEN THE GOVERNMENT OF JAMAICA AND THE GOVERNMENT OF THE REPUBLIC OF COLOMBIA

The Government of the Republic of Colombia and the Government of Jamaica;

Recalling the Fishing Agreement between Jamaica and the Republic of Colombia of 6th August, 1982, which expired on 6th August 1984;

Considering the traditional bonds of friendship which have existed between both countries;

Bearing in mind the common interest of both countries in the rational exploitation, the proper management and conservation of fishing resources;

Taking into account the contribution that a Fisheries Agreement will make to the satisfaction of the nutritional needs of the Jamaican people and the willingness of the Colombian Government to make a contribution in this regard;

Noting that Bajo Nuevo and Serranilla allow the habitation and can sustain of their own the life of the Jamaican fishermen and facilitate the artisanal fishing activities as foreseen in this Agreement.

Desirous of concluding a new Agreement so that vessels under the Jamaican flag may continue to carry aut specific fishing activities in certain maritime areas of the San Andres archipelago identified in this Agreement;

Have agreed upon the following:

ARTICLE I

The Government of the Republic of Colombia shall grant fishing vessels under the Jamaican flag, access to certain areas under Colombian jurisdiction and sovereignty referred to in Article II for the purpose of engaging in fishing activities under the conditions laid down in this Agreement.

ARTICLE II

Jamaican fishing vessels with the characteristics specified in Article III shall be able to undertake fishing activities in the following areas:

The Bajo Nuevo Cay Zone:	The area within the limit of 12 nautical miles, measured from the low water mark of Bajo Nuevo Cay.
The Serranilla Cays Zone:	The area within the limit of 12 nautical miles, measured from the low water mark of Serranilla Cays.

ARTICLE III

a) Jamaican fishing vessels shall only be able to catch species of the families listed below:

Spanish Name	Scientific Name of the Family	English Name
Meros, Chernas, Cabrillas	Serranidae	Groupers
Jureles	Carangindae	Jacks
Pargos	Lutjanidae	Snappers
Roncos	Pamadasydae	Grunt
Salmonetes	Mullidae	Goat Fish
		Mullets
Peces Loro	Scaridae	Parrot Fishes
Peje Puerco	Balistidae	Trigger Fishes
		Filefish
Toyos	Carcharinidae	Sharks
Macarela	Scombridae	King Fish,
		Mackerel

provided, however, the species captured accidentally or the by-catch may be disposed of by the fishermen.

b) The maximum annual catch permissible shall be the following:

Bajo Nuevo Cay Zone	160 metric tons per year
Serranilla Cays Zone	430 metric tons per year.

c) The fishing gear to be used by the Jamaican fishermen shall be those classified as single composite line, traps, gill nets, trammel and lampara type nets, light or bait. The use of fishing gear of other descriptions is prohibited.

d) The Government of Colombia shall permit no more than ten (10) vessels under the Jamaican flag to conduct fishing activities under this Agreement. These ten (10) vessels shall comprise seven (7) independent fishing vessels and three (3) carrier vessels.

e) The specifications of all vessels shall not exceed the following:

1. Length : 75 feet
2. Engines : 400 H.P.
3. Net capacity of hold : 25 metric tons with refrigeration by ice.

   10 metric tons with automatic refrigeration.

f) Each carrier vessel assigned to a fishing zone as established in the present Agreement may have up to six (6) auxiliary boats of a maximum length of twenty eight (28) feet, powered by outboard motors of not more than forty (40) h.p. and have a crew of not more than five (5) fishermen in respect of each such boat.

g) The three (3) carrier vessels shall not operate any fishing equipment and shall be assigned to the Serranilla Cays Zone. In a case where damage to one of the carrier vessels makes necessary its replacement for a long time, this carrier vessel shall be replaced by another with similar characteristics once the Jamaican Government has notified the Embassy of the Republic of Colombia in Kingston which shall authorise such replacement and communicate this to INDERENA.

(h) The seven (7) independent fishing vessels shall be assigned in the following manner:

1. Four (4) in the Serranilla Cays Zone
2. Three (3) in the Bajo Nuevo Cay Zone

ARTICLE IV

Vessels under the Jamaican flag which, by virtue of this Agreement, undertake fishing expeditions in the areas under Colombian jurisdiction covered by this Agreement, shall be subject to the relevant laws and regulations in force in Colombia regarding fishing, the conservation of living resources, the preservation of the environment, pollution, sanitation, navigation, and other relevant areas including those which regulate the stay of foreigners in Colombia.

ARTICLE V

The Republic of Colombia shall permit temporary stationing of Jamaican fishermen on Serranilla and Bajo Nuevo Cays, in order to carry out fishing activities under this Agreement, subject to the following conditions:

a) They will be subject to Colombian rules, regulations, and laws.
b) All installations and works taking place within the Cays referred to must be subject to the prior approval of the Colombian authorities.
c) It will be possible to have temporarily a maximum of 28 fishermen on Serranilla and 12 on Bajo Nuevo

ARTICLE VI

The Government of Jamaica shall provide the Government of Colombia every three months with a general statistical information of fishing expeditions undertaken during the corresponding period. The format for the presentation of such information and the data which it ought to contain are described in Annex I.

ARTICLE VII

The representatives of the Government of Colombia shall have the right at any time to oversee the off-loading at any Jamaican port to verify the catch of the vessels authorised under this Agreement or that they have otherwise satisfied the provisions of this Agreement.

ARTICLE VIII

a) The Government of Jamaica, in accordance with the provisions of Article III, shall apply through the Embassy of the Republic of Colombia in Kingston for the appropriate permits for the vessels to be used for fishing expeditions indicating their characteristics and giving a precise account of their crew members and auxiliary boats. Such permits shall be valid for one calendar year and are renewable for a similar period.

b) Provided that the application comply with the terms expressed in the present Agreement, the Government of Colombia, through the Institute for Renewable Natural Resources and the Environment (Inderena) and Direccion General Maritima y Portuaria (Dimar), shall issue the appropriate permits, patents, and registration documents within a reasonable time.

c) The vessels should place the fishing patent in a visible place and have available the registration documents of the accompanying boats so that they may be verified at any time by the competent Colombian authorities.

d) All fishermen as well as crew members of the above-mentioned vessels must be provided with identification cards issued by the Colombian Consulate in Kingston, with validity of twelve (12) months, and shall be renewable for a similar period.

ARTICLE IX

a) The fishing vessels engaged in fishing activities under this Agreement shall not be seized or detained by the Colombian authorities unless they have breached the laws and regulations of the Republic of Colombia.

b) Any breach or offence involving Jamaican citizens or vessels referred to in this Agreement will be punishable under the laws of Colombia. However, the punishment to be imposed by the Colombian Authorities on Jamaican fishermen or crew members who commit any violation of the regulations relating to fishing activities under this Agreement or regulations related to fishing or the conservation of living resources shall not include imprisonment.

c) In the event of any seizure or detention of a fishing vessel or any punishment to crew members of said vessels or Jamaican fishermen, the Government of Colombia shall promptly notify the Government of Jamaica through the appropriate channels, the facts causing the seizure or detention as well as the steps to be taken in connection with the fishermen, crew or vessels.

d) The Colombian Authorities, upon the receipt of a reasonable surety or another appropriate guarantee, will promptly release any fishermen, crew members or vessels in its custody for any breach of the provisions concerning fishing activities contemplated in this Agreement or any other regulations governing fishing activities in Colombia.

e) The Government of Colombia will not apply in a discriminatory manner its laws and the other domestic regulations to Jamaican vessels, crew members or fishermen.

ARTICLE X

a) Either Party may request consultations with the other Party for the purpose of considering any question relating to the implementation of this Agreement.

b) Consultations within the terms of this Article shall begin within sixty (60) days from the date of the request for such consultations.

c) If either the Government of Jamaica or the Government of Colombia considers it desirable to modify any of the provisions of this Agreement or the annexes thereto, it may request consultations for that purpose.

d) Any such modifications, other than those relating to Article III shall be subject to approval in accordance to the appropriate legal provisions required in each country and shall enter into force on the date of the exchange of the Instruments of Ratification.

e) Modifications to Article III shall enter into force on the exchange of Notes by the respective Foreign Ministries.

ARTICLE XI

Nothing in this Agreement shall be construed as affecting the delimitation of the maritime spaces between the areas under the sovereignty and the national jurisdiction of each state.

ARTICLE XII

Differences arising concerning the interpretation or application of this Agreement shall be settled by the two parties by diplomatic means or other means of peaceful settlement as recognised by International Law.

ARTICLE XIII

The present Agreement shall be subject to approval in accordance with the appropriate legal procedures required in each country, and shall come into force on the date of exchange to instruments of ratification.

ARTICLE XIV

The present Agreement shall remain in force until the 22th August 1986 unless terminated by either Contracting Party by twelve (12) months notice in writing. Notwithstanding this provision, the Agreement may be terminated before of this date, any time by mutual consent.

Done in this City of Cali this 30th August, 1984 each in the English and Spanish language, both texts being equally authoritative.

For the Government
of Jamaica

NEVILLE E. GALLIMORE
Minister of State in the
Ministry of Foreign Affairs

For the Government
of Colombia

AUGUSTO RAMIREZ OCAMPO
Minister of Foreign Affairs

Annex 19

NOTE S-DM-13-014681 FROM THE MINISTRY OF FOREIGN AFFAIRS OF COLOMBIA, 22 APRIL 2013

(Available at: http://www.un.org/depts/los/clcs_new/submissions_files/submission_nic_66_2013.htm)

United Nations A/67/852

General Assembly

Distr .: General
2 May 2013
English
Original: Spanish

Sixty-seventh session
Agenda item 75 (a)
Oceans and the law of the sea

Note verbale dated 29 April 2013 from the Permanent Mission of Colombia to the United Nations addressed to the Secretary-General

The Permanent Mission of Colombia to the United Nations presents its compliments to the Secretary-General and has the honour to transmit herewith the diplomatic note dated 22 April 2013 from the Minister for Foreign Affairs, María Ángela Holguín Cuellar, addressed to the Secretary-General of the United Nations, Ban Ki-moon, by means of which the Government of Colombia makes a declaration concerning its continental shelf with the terms and conditions indicated therein (see annex) .

In that regard, the Permanent Mission of Colombia to the United Nations would be grateful if the present note could be circulated as a document of the sixty-seventh session of the General Assembly under agenda item 75 (a) entitled “Oceans and the law of the sea” . Upon instructions from its Government, the Permanent Mission also requests that this note be sent to all relevant organs, bodies and entities of the United Nations, be posted on the website of the Division for Ocean Affairs and the Law of the Sea and be included in the next Law of the Sea Bulletin .

13-32100 (E) 020513 030513

Annex to the note verbale dated 29 April 2013 from the Permanent Mission of Colombia to the United Nations addressed to the Secretary-General

[Original: English]

S-DM-13-014681 Bogotá, 22 April 2013

Under customary international law, the Republic of Colombia exercises, *ipso facto etab initio* and by virtue of its sovereignty over its land, sovereign rights over its continental shelf in the Caribbean Sea and in the Pacific Ocean . In accordance with customary international law, the Republic of Colombia's continental shelf comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance . Also in accordance with customary international law, the Republic of Colombia's islands, regardless of their size, enjoy the same maritime rights as the country's other land territory .

The Republic of Colombia shall never accept that its enjoyment and exercise of these sovereign rights in any way has been or can be affected by a unilateral act or omission of another State .Any attempt to affect those rights, including but not limited to the submission of preliminary or definitive documentation to the Commission on the Limits of the Continental Shelf, shall be (or should be deemed to be) objected to by the Republic of Colombia . The Republic of Colombia shall take all steps required to ensure its continued enjoyment and exercise of these sovereign rights, consistent with international law .

I request that the present statement be circulated to all members of the United Nations and to all relevant organs, bodies and entities of the United Nations, be posted on the website of the Division for Ocean Affairs and the Law of the Sea and be included in the next Law of the Sea Bulletin .

(*Signed*) María Ángela **Holguín Cuellar**

Annex 20

NOTE S-DM-13-035351 FROM THE MINISTRY OF FOREIGN AFFAIRS OF COLOMBIA, 24 SEPTEMBER 2013

(Available at: http://www.un.org/depts/los/clcs_new/submissions_files/submission_nic_66_2013.htm)

Libertad y Orden

Ministerio de Relaciones Exteriores
República de Colombia

S-DM-13-035351

Bogotá, 24 September 2013

Mr. Secretary General,

I have the honour to address Your Excellency on the occasion of referring to the document entitled "Submission to the Commission on the Limits of the Continental Shelf pursuant to Article 76, paragraph 8 of the United Nations Convention on the Law of the Sea, 1982 – Part I: Executive Summary", submitted by Nicaragua on 24 June 2013, which was published on the website of that Commission.

As Your Excellency is aware, the Republic of Colombia is not a party to the United Nations Convention on the Law of the Sea. Nicaragua's submission is therefore not opposable to Colombia and does not affect Colombia's rights to its continental shelf. Colombia further notes that no action or inaction by the Commission on the Limits of the Continental shelf is opposable to Colombia, nor could such action or inaction affect Colombia's rights under international law.

In this connection, the Republic of Colombia wishes to inform the United Nations and its member States that Nicaragua's submission makes reference to submarine areas in the Caribbean Sea that belong to Colombia under international law.

His Excellency
BAN KI-MOON
Secretary-General of the United Nations
New York

Libertad y Orden

Ministerio de Relaciones Exteriores
República de Colombia

I take this opportunity to reiterate the contents of my Note of 23 April 2013, addressed to Your Excellency, to the effect that, under customary international law, the Republic of Colombia exercises, ipso facto and ab initio and by virtue of its sovereignty over its land, sovereign rights over its continental shelf inter alia in the Caribbean Sea. In accordance with customary international law, this comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance. Also in accordance with customary international law, the Republic of Colombia's islands, regardless of their size, enjoy the same maritime rights as the country's other land territory.

By virtue of the abovementioned, the Republic of Colombia formulates an express reservation on the entire document mentioned before and requests Your Excellency that the present statement be circulated to all members of the United Nations, including the States Party to the aforesaid Convention and be transmitted to the Commission on the Limits of the Continental Shelf.

I avail myself to renew to Your Excellency the assurances of my highest consideration.

MONICA LANZETTA MUTIS
Acting Minister of Foreign Affairs
Deputy Minister of Foreign Affairs

Annex 21

NOTE VERBALE FROM THE MINISTRY OF FOREIGN AFFAIRS OF COLOMBIA, 5 FEBRUARY 2014

(Available at: http://www.un.org/depts/los/clcs_new/submissions_files/submission_nic_66_2013.htm)

United Nations A/68/743

General Assembly

Distr .: General
11 February 2014
English
Original: Spanish

Sixty-eighth session
Agenda item 76
Oceans and the law of the sea

Note verbale dated 6 February 2014 from the Permanent Mission of Colombia to the United Nations addressed to the Secretary-General

The Permanent Mission of Colombia to the United Nations presents its compliments to the Secretary-General and has the honour to transmit herewith the diplomatic note dated 5 February 2014 from the Minister for Foreign Affairs, María Ángela Holguín Cuéllar, addressed to the Secretary-General of the United Nations, by means of which the Government of Colombia makes a declaration concerning the letter of the Republic of Nicaragua dated 20 December 2013 with the terms and conditions contained therein (see annex) .

The Permanent Mission of Colombia to the United Nations would be grateful if the Secretary-General would circulate the present note to all Members of the United Nations, including States parties to the United Nations Convention on the Law of the Sea, as a document of the General Assembly under agenda item 76, and transmit it to the Commission on the Limits of the Continental Shelf .

14-23241 (E) 140214 180214

A/68/743

Annex to the note verbale dated 6 February 2014 from the Permanent Mission of Colombia to the United Nations addressed to the Secretary-General

[Original: English]

5 February 2014

I have the honour to address you on the occasion of referring to the letter sent by the Republic of Nicaragua on 20 December 2013 in relation to our note of 24 September 2013, wherein we expressed our concern with regard to Nicaragua's document entitled "Submission to the Commission on the Limits of the Continental Shelf pursuant to article 76, paragraph 8, of the United Nations Convention on the Law of the Sea, 1982 — Part I: Executive Summary", submitted by Nicaragua on 24 June 2013 and published on the Commission's website. In reference to the aforementioned, we would like to reiterate our concern regarding various matters.

Nicaragua's submission makes reference to submarine areas in the Caribbean Sea that belong to Colombia under international law. The Republic of Colombia rejects Nicaragua's submission in which it claims rights to the seabed and the subsoil of the submarine areas appurtenant to the Colombian islands in the Caribbean as well as Colombia's continental territory. It should also be noted that Nicaragua's submission disregards matters relating to the delimitation of boundaries with Colombia which have already been resolved.

Furthermore, we reaffirm that the Republic of Colombia is not a party to the United Nations Convention on the Law of the Sea. As a result, Nicaragua's submission is not opposable to Colombia and does not affect Colombia's rights to its continental shelf. Colombia also reiterates that it has not consented to this procedure.

By virtue of the above, the Republic of Colombia reiterates the terms of our notes of 22 April 2013 and 24 September 2013 submitted to you, and trusts that the Commission on the Limits of the Continental Shelf will refrain from considering Nicaragua's submission of 24 June 2013.

The Government of the Republic of Colombia requests that this note be circulated to all Members of the United Nations, including the States parties to the aforementioned convention, and be transmitted to the Commission on the Limits of the Continental Shelf.

(*Signed*) María Ángela **Holguín Cuéllar**
Minister for Foreign Affairs

Annex 22

NOTE MCRONU-438-2013 FROM THE PERMANENT MISSION OF COSTA RICA TO THE UNITED NATIONS, 15 JULY 2013

(Available at: http://www.un.org/depts/los/clcs_new/submissions_files/submission_nic_66_2013.htm)

Permanent Mission of Costa Rica to the United Nations
New York

MCRONU-438-2013

New York, 15 July 2013

The Permanent Mission of Costa Rica to the United Nations presents its compliments to the Secretary-General of the United Nations and, with respect to the communication submitted to the Commission on the Limits of the Continental Shelf by the Republic of Nicaragua on 24 June 2013 concerning the extension of its continental shelf in the Caribbean Sea, would like to state the following:

In section II, paragraph 8, of its executive summary, Nicaragua states that there are no unresolved maritime disputes relating to its request .This is incorrect .Costa Rica and Nicaragua have an unresolved maritime dispute relating to Nicaragua's request in so far as the marine areas claimed by Nicaragua encroach upon marine areas belonging to Costa Rica under international law .

The existence of a maritime dispute between Costa Rica and Nicaragua is a well-known fact; this has led the Republic of Costa Rica to request that Nicaragua continue negotiations with a view to an agreement on maritime boundaries in the Caribbean Sea, a copy of which was sent to the Secretary-General of the United Nations on 8 March 2013 through note No .MCRONU-318-2013 .

Therefore, in accordance with rule 46 of the Rules of Procedure of the Commission, which deals with cases involving land or maritime disputes such as this one, Nicaragua's request is governed by paragraph 5 (a) of Annex I to the Rules of Procedure .

Costa Rica requests the Commission on the Limits of the Continental Shelf to take note of this communication and have it duly circulated and issued .

The Permanent Mission of the Republic of Costa Rica to the United Nations takes this opportunity to convey to the Secretary-General of the United Nations the renewed assurances of its highest consideration .

H .E Mr .Ban Ki-moon
Secretary-General of the United Nations
New York

Annex 23

LETTER FROM THE PERMANENT REPRESENTATIVE OF COSTA RICA TO THE UNITED NATIONS, 20 JANUARY 2014

(Available at: http://www.un.org/depts/los/clcs_new/submissions_files/submission_nic_66_2013.htm)

United Nations A/68/741

General Assembly

Distr .: General
7 February 2014

Original: English

Sixty-eighth session
Agenda items 76 (a) and 85

Oceans and the law of the sea

The rule of law at the national and international levels

Letter dated 20 January 2014 from the Permanent Representative of Costa Rica to the United Nations addressed to the Secretary-General

Costa Rica reaffirms its communication submitted on 15 July 2013 regarding Nicaragua's submission to the Commission on the Limits of the Continental Shelf and, with respect to Nicaragua's communication MINIC-NU-048-13 of 20 December 2013, would like to state the following .

The delimitation of the continental shelf between Costa Rica and Nicaragua is pending and is in dispute .Areas claimed by Nicaragua in its submission encroach on Costa Rican entitlements .The tripoint that Nicaragua refers to in its communication of 20 December 2013 does not reflect accurately the geographic or legal relationship among Costa Rica, Panama and Colombia, and is wholly unrelated to the outstanding question of the disputed maritime boundary between Costa Rica and Nicaragua . Costa Rica made its position clear during its request to intervene in *Territorial and Maritime Dispute (Nicaragua v. Colombia)* . Nicaragua's continued insistence upon its conflicting and incorrect position reflects the existence of a dispute between the two countries .

Consequently, Costa Rica rejects the claims advanced by Nicaragua in its submission, considers them to be without legal effect, reserves its rights in this regard and refers the Commission to its Rules of Procedure, specifically rule 46 and annex I, governing submissions in case of a dispute between States with opposite or adjacent coasts or in other cases of unresolved land or maritime disputes .

In that regard, I kindly request that the present letter be circulated as a document of the General Assembly, under agenda items 76 (a) and 85 . Upon instructions from my Government, I also request that this letter be sent to all relevant organs, bodies and entities of the United Nations, be posted on the website of the Division for Ocean Affairs and the Law of the Sea and be included in the next Law of the Sea Bulletin .

(*Signed*) Eduardo **Ulibarri**
Ambassador
Permanent Representative

14-23004 (E) 110214

Annex 24

NOTE DGPE/DG/665/22013 FROM THE MINISTRY OF FOREIGN AFFAIRS OF PANAMA, 30 SEPTEMBER 2013

(Available at: http://www.un.org/depts/los/clcs_new/submissions_files/submission_nic_66_2013.htm)

Republic of Panama

Ministry of Foreign Affairs
Office of the Minister
DGPE/DG/665/22013

30 September 2013

Sir,

I have the honour to address you with reference to the request dated 24 June 2013 submitted by the Republic of Nicaragua to the Commission on the Limits on the Continental Shelf, pursuant to article 76, paragraph 8, of the United Nations Convention on the Law of the Sea, with a view to extending its continental shelf beyond 200 nautical miles .

Panama wishes to make the following comments in connection with that request because it affects Panamanian maritime space. We thus consider it advisable to make some relevant legal and technical points relating to Panamanian maritime boundaries, so that the Commission on the Limits of the Continental Shelf can take them into account as it weighs the matter .

In its Judgment of 19 November 2012 entitled "Territorial and Maritime Dispute (Nicaragua v .Colombia)", the International Court of Justice recognized the right of the Republic of Panama over its maritime areas and specifically stated the following:

> "155 .[…] For Nicaragua, the southern boundary of the relevant area is formed by the demarcation lines agreed between Colombia and Panama and Colombia and Costa Rica (see paragraph 160 below) on the basis that, since Colombia has agreed with those States that it has no title to any maritime areas to the south of those lines, they do not fall within an area of overlapping entitlements ."[…]
>
> […]
>
> "163 .The Court recalls that the relevant area *cannot extend beyond the area in which the entitlements of both Parties overlap* .Accordingly, if either Party has no entitlement in a particular area, whether because of an agreement it has concluded with a third State or because that area lies beyond a judicially determined boundary between that Party and a third State, that area cannot be treated as part of the relevant area for present purposes .*Since Colombia has no potential entitlements to the south and east of the boundaries which it has agreed with Costa Rica and Panama, the relevant area cannot extend beyond those boundaries* ." [*italics added*] .

Moreover, the Court recognized the delimitation treaties of 1976 between Colombia and Panama which lay down the coordinates for the maritime boundary between the two countries .It likewise stated the following:

His Excellency Ban Ki-moon
Secretary-General
United Nations
New York

"160 . In both the north and the south, the interests of third States become involved ."

"[…] The endpoint of that boundary was not determined but 'the Court made a clear determination [in paragraphs 306-319 of the 2007 Judgment] that *the bisector line would extend beyond the 82nd meridian until it reached the area where the rights of a third State may be affected*' […] ."

"In the south, the Colombia-Panama Agreement (*UNTS*, Vol . 1074, p .221) was signed in 1976 and entered into force on 30 November 1977 . It *adopted a step-line boundary as a simplified form of equidistance in the area between the Colombian islands and the Panamanian mainland* .Colombia and Costa Rica signed an Agreement in 1977, which adopts a boundary line that extends from the boundaries agreed between Colombia and Panama (described above) and between Costa Rica and Panama .[…]" [*italics added*] .

It must be pointed out that, throughout, the International Court of Justice paid special attention to the limited application of its Judgment and its impact on neighbouring States, determining that both must respect rights previously recognized and agreed between countries . Consequently the result of the decision resolving the maritime and territorial conflict between Nicaragua and Colombia may not compromise the law protecting Panama's maritime territorial extension . Furthermore, as stipulated in article 59 of the Statute of the Court, the decision of the Court has no binding force except between the parties and in respect of that particular case, meaning that decisions of the Court neither benefit nor prejudice third States .

In order to make available the technical considerations provided by the Tommy Guardia National Geographic Institute on which our comments are based, and in order to allow the Commission to consider them in its evaluation, we attach herewith a map showing the full extent of the maritime space of the Republic of Panama, delimited by the boundary treaties signed with the Republic of Costa Rica and the Republic of Colombia, and the indisputable overlap caused by the Republic of Nicaragua's request for an extension of its continental shelf . Also attached is a certified copy of the relevant bilateral treaties signed with neighbouring States .

Consequently, in view of the foregoing, I have the honour to request that the present note should be included in the documentation for the agenda of the Commission on the Limits of the Continental Shelf when it formulates its observations regarding the request submitted by the Republic of Nicaragua .

Accept, Sir, the renewed assurances of our highest consideration .

(*Signed*) Fernando Núñez Fábrega
Minister for Foreign Affairs

3/3

MARITIME BORDERS OF THE REPUBLIC OF PANAMA

Overlap on the maritime space of the Republic of Panama resulting from the proposal of the Republic of Nicaragua to extend the limits of its continental shelf

Annex 25

NOTE DGPE/FRONT/082/14 FROM THE MINISTRY OF FOREIGN AFFAIRS OF PANAMA, 3 FEBRUARY 2014

(Available at: http://www.un.org/depts/los/clcs_new/submissions_files/submission_nic_66_2013.htm)

DGPE/FRONT/082/14

3 February 2014

Sir,

I have the honour to write to you with regard to note MINIC-UN-50-13 of 20 December 2013, by which the Permanent Mission of Nicaragua to the United Nations submitted to the Commission on the Limits of the Continental Shelf its views concerning the position of the Government of Panama regarding Nicaragua's request to extend its continental shelf beyond 200 nautical miles.

In this regard, I would like to state that the extension claimed by Nicaragua overlaps with Panamanian maritime areas. When the limits established in the Treaty on the delimitation of marine and submarine areas and related matters between the Republic of Panama and the Republic of Colombia are compared against the area between the coordinates of fixed points (FP) FP-83 and FP-164 set out in the executive summary submitted by Nicaragua, it is absolutely clear that those coordinates fall within Panama's marine and submarine areas and continental shelf. A map is attached hereto for your reference.

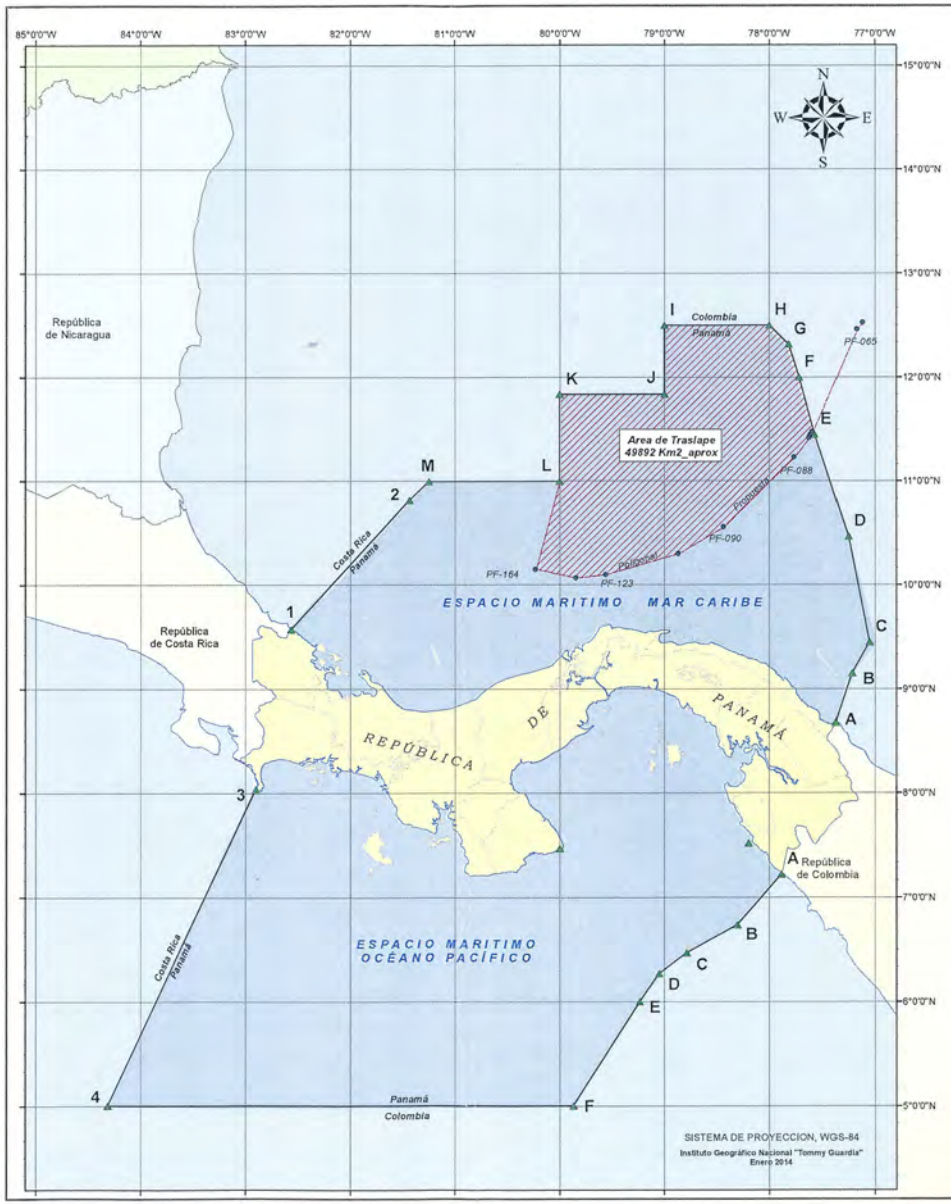
In this regard, the United Nations Convention on the Law of the Sea recognizes the scope and obligations set out in agreements between States parties, such as the delimitation treaty signed between Panama and Colombia, which covers marine and submarine areas. Therefore, the claim for extension submitted by Nicaragua cannot affect the limits of the continental shelf established in the Treaty on the delimitation of marine and submarine areas between Panama and Colombia.

We strongly object to the claim for the extension of the continental shelf submitted by the Republic of Nicaragua; we do not consent to the Commission's consideration or assessment of Nicaragua's submission and we request the Commission to dismiss it in its entirety.

Accept, Sir, the renewed assurances of my highest consideration.

Francisco **Álvarez De Soto**
Minister for Foreign Affairs

His Excellency
Ban Ki-moon
Secretary-General
United Nations
New York



ANATI
AUTORIDAD NACIONAL DE ADMINISTRACIÓN DE TIERRAS

INSTITUTO GEOGRÁFICO NACIONAL "TOMMY GUARDIA"

FRONTERAS MARITIMAS DE LA REPUBLICA DE PANAMA TRASLAPE DEL ESPACIO MARINO Y SUBMARINO DE LA REPUBLICA DE PANAMA POR LA PROPUESTA DE LA REPUBLICA DE NICARAGUA DE EXTENDER LOS LIMITES DE SU PLATAFORMA CONTINENTAL MAS ALLA DE LAS 200 MILLAS NAUTICAS

Lista de coordenadas de los puntos fijos (PF) que definen el limite exterior de la plataforma continental, propuesto por la República de Nicaragua la cual traslapa el espacio marino y submarino de la República de Panamá

Punto Fijo (PF)	Longitud (W)	Latitud (N)
83	-77.704607	11.291187
84	-77.715407	11.278279
85	-77.726422	11.265548
86	-77.737651	11.253001
87	-77.749089	11.240642
88	-77.760733	11.228468
89	-77.77258	11.216491
90	-78.432815	10.557372
91	-78.444832	10.545586
92	-78.457047	10.534001
93	-78.469453	10.522618
94	-78.482049	10.511439
95	-78.49483	10.500471
96	-78.507793	10.489714
97	-78.520933	10.479172
98	-78.53425	10.468847
99	-78.547736	10.458742
100	-78.561393	10.448861
101	-78.575211	10.439207
102	-78.589189	10.429781
103	-78.603322	10.420584
104	-78.617609	10.411625
105	-78.632043	10.402898
106	-78.646621	10.394412
107	-78.661339	10.386165
108	-78.676193	10.378163
109	-78.691179	10.370408
110	-78.706293	10.362899
111	-78.721531	10.355639
112	-78.736888	10.34863
113	-78.752359	10.341877
114	-78.76794	10.335379
115	-78.783632	10.329137
116	-78.799422	10.323155
117	-78.815311	10.317433
118	-78.831294	10.311973
119	-78.847367	10.306776
120	-78.863523	10.301845
121	-79.526776	10.108653
122	-79.543004	10.103989

Punto Fijo (PF)	Longitud (W)	Latitud (N)
123	-79.559305	10.099392
124	-79.575681	10.095463
125	-79.592122	10.091607
126	-79.608626	10.088019
127	-79.625187	10.084705
128	-79.641801	10.081663
129	-79.658463	10.078897
130	-79.675169	10.076404
131	-79.691916	10.074187
132	-79.708696	10.072244
133	-79.725506	10.07058
134	-79.742343	10.069193
135	-79.7592	10.068082
136	-79.776072	10.067248
137	-79.792958	10.066694
138	-79.809849	10.066418
139	-79.826744	10.066418
140	-79.843635	10.066698
141	-79.860521	10.067254
142	-79.877393	10.068091
143	-79.89425	10.069204
144	-79.911087	10.070593
145	-79.927897	10.07226
146	-79.944677	10.074205
147	-79.961422	10.076424
148	-79.978128	10.078919
149	-79.99479	10.08169
150	-80.011404	10.084734
151	-80.027964	10.08805
152	-80.044466	10.09164
153	-80.060908	10.095499
154	-80.07728	10.099629
155	-80.093582	10.104029
156	-80.10981	10.108696
157	-80.125955	10.113629
158	-80.142017	10.11883
159	-80.157989	10.124291
160	-80.173869	10.130016
161	-80.18965	10.136002
162	-80.205328	10.142246
163	-80 2209	10.148748
164	-80.226063	10.151004

*Fuente:
República de Nicaragua
Presentación a la Comisión de Limites de la Plataforma Continental
RESUMEN EJECUTIVO, Junio 2013

COSTA RICA
REPÚBLICA DE PANAMÁ
TRATADO SOBRE DELIMITACIÓN DE ÁREAS MARINAS ENTRE LA REPÚBLICA DE PANAMÁ Y LA REPÚBLICA DE COSTA RICA. FIRMADO EL DÍA 2 DE FEBRERO DE 1980. RATIFICADO MEDIANTE LEY 5, DEL 5 DE NOV. DE 1981.

COLOMBIA
REPÚBLICA DE PANAMÁ
TRATADO SOBRE DELIMITACIÓN DE ÁREAS MARINAS ENTRE LA REPÚBLICA DE PANAMÁ Y LA REPÚBLICA DE COLOMBIA, FIRMADO EL DÍA 20 DE NOVIEMBRE DE 1976. RATIFICADO MEDIANTE LEY 14 DEL 10 DE AGO. DE 1977.

COORDENADAS GEOGRAFICAS, NAD-27

MAR CARIBE PUNTOS	LATITUD	LONGITUD W
1	09°34' 00"	82°34' 00"
2	10°45' 00"	81°26' 00.2"

OCÉANO PACÍFICO PUNTOS	LATITUD	LONGITUD W
3	07°02' 18"	82°54' 12.5"
4	05°00' 00"	84° 19' 00"

MAR CARIBE PUNTOS	LATITUD	LONGITUD W
A	08°41' 01.2"	77°21' 53.5"
B	09°09' 00"	77°13' 00"
C	09°27' 00"	77°03' 00"
D	10°28' 00"	77° 15' 00"
E	11°37' 00"	77°34' 00"
F	12°06' 00"	77°43' 00"
G	12° 19' 00"	77°49' 00"
H	12° 41' 00"	78°06' 00"
I	12°39' 00"	78°09' 00"

MAR CARIBE PUNTOS	LATITUD	LONGITUD W
J	11°56' 00"	78°06' 00"
K	11°56' 00"	80°00' 00"
L	11°56' 00"	80°00' 00"
M	11°56' 00"	81° 0' 00"

OCÉANO PACÍFICO PUNTOS	LATITUD	LONGITUD W
A	07°12' 39"	77°52' 23.8"
B	05° 56' 00"	78° 16' 00"
C	05° 29' 00"	78°47' 00"
D	05° 18' 00"	79°02' 00"
E	05° 06' 00"	79° 14' 00"
F	05° 00' 00"	79°52' 00"

COORDENADAS GEOGRAFICAS, WGS-84

MAR CARIBE PUNTOS	LATITUD	LONGITUD
1	09° 34' 00.00"	82° 33' 59.47"
2	10° 45' 00.34"	81° 25' 57.59"

OCÉANO PACÍFICO PUNTOS	LATITUD	LONGITUD
3	07° 02' 30.51"	82° 54' 13.00"
4	05° 00' 00.53"	84° 18' 59.60"

MAR CARIBE PUNTOS	LATITUD	LONGITUD
A	08° 40' 56.32"	77° 22' 13.81"
B	09° 09' 04.81"	77° 12' 58.05"
C	09° 27' 04.80"	77° 02' 58.08"
D	10° 28' 04.40"	77° 14' 58.09"
E	11° 37' 04.20"	77° 33' 58.11"
F	12° 06' 04.39"	77° 42' 58.13"
G	12° 19' 04.02"	77° 48' 58.13"
H	12° 30' 53.96"	77° 58' 58.14"
I	12° 39' 53.89"	78° 08' 58.21"

MAR CARIBE PUNTOS	LATITUD	LONGITUD
J	11° 56' 04.12"	78° 06' 58.20"
K	11° 56' 04.13"	78° 59' 58.28"
L	11° 56' 04.29"	79° 59' 58.28"
M	11° 56' 04.30"	81° 14' 58.33"

OCÉANO PACÍFICO PUNTOS	LATITUD	LONGITUD
A	07° 12' 57.20"	77° 52' 58.80"
B	06° 56' 05.17"	78° 17' 58.17"
C	06° 29' 05.23"	78° 48' 58.21"
D	06° 18' 05.23"	79° 02' 58.23"
E	06° 06' 05.22"	79° 15' 58.24"
F	05° 00' 05.53"	79° 53' 58.29"

Annex 26

NOTE LOS/15 FROM THE PERMANENT MISSION OF JAMAICA TO THE UNITED NATIONS, 12 SEPTEMBER 2013

(Available at: http://www.un.org/depts/los/clcs_new/submissions_files/submission_nic_66_2013.htm)

PERMANENT MISSION OF JAMAICA
TO THE UNITED NATIONS
767 Third Avenue, 9th Fl.
New York, NY 10017
Tel: (212) 935-7509
Fax: (212) 935-7607
Email: jamaica@un.int

Ref: LOS/15

The Permanent Mission of Jamaica to the United Nations presents its compliments to the Secretary General of the United Nations, in his capacity as depository of the United Nations Convention on the Law of the Sea *("the Convention")*, and has the honour to refer to the submission made by the Government of the Republic of Nicaragua on 24th June 2013, to the Commission on the Limits of the Continental Shelf *("the Commission")*, in accordance with Article 76 paragraph 8, and Annex II of the Convention.

Having regard to the potential areas of continental shelf that Nicaragua is seeking to establish through the above-mentioned submission, the Permanent Mission hereby advises of the overlapping claims in the areas of exclusive economic zone appertaining to Jamaica. The Permanent Mission affirms, therefore, that Jamaica reserves its rights under the Convention.

The Permanent Mission of Jamaica to the United Nations avails itself of this opportunity to renew to the Secretary General of the United Nations the assurances of its highest consideration.

New York, 12th September 2013

PERMANENT MISSION OF JAMAICA TO THE UNITED NATIONS
New York

United Nations Secretariat
United Nations, New York

Annex 27

JOINT COMMUNICATION FROM THE GOVERNMENTS OF COLOMBIA, COSTA RICA AND PANAMA, 23 SEPTEMBER 2013

(Available at: http://www.un.org/depts/los/clcs_new/submissions_files/submission_nic_66_2013.htm)

13 .48845

Translated from Spanish

New York, 23 September 2013

Sir,

We, the Heads of State and Government of Colombia, Costa Rica and Panama, have the honour to address you in order to express our concern at the claim submitted by Nicaragua for the extension of its marine and submarine areas and its land territory to the detriment of the legitimate rights and interests of our respective countries, which constitutes a clear threat to regional peace and security .

In that connection, our States, through dialogue and good faith, have for decades contributed to peace and stability in the Caribbean Sea region, based on respect for international law and for the rights of each State, ensuring peaceful coexistence and security in a highly complex and diverse region .

Nicaragua, disregarding the rights of our States, has stated before the Commission on the Limits of the Continental Shelf that there are no unresolved maritime disputes in relation to its unfounded claim to a continental shelf area beyond 200 nautical miles .This is incorrect and we, the undersigned, all emphatically reject this claim since it affects extensive areas belonging to our countries .

In view of the above, we, the undersigned, categorically reject the unfounded claims of Nicaragua to continental shelf areas and other marine areas not belonging to it, which are detrimental to our legitimate rights in the area, and we hereby state our firm resolve to prevent such claims from succeeding .

His Excellency Mr .Ban Ki-moon

United Nations Secretary-General

New York

We trust that the United Nations, true to its purpose of maintaining international peace and security, will take account of this concern and this unequivocal joint statement .

We should be grateful if you would have a copy of this letter sent to all Member States, to the Commission on the Limits of the Continental Shelf and to the International Court of Justice .

Accept, Sir, the assurances of our highest consideration .

(*Signed*) Juan Manuel **Santos**
President of Colombia

(*Signed*) Laura **Chinchilla**
President of Costa Rica

(*Signed*) Ricardo **Martinelli**
President of Panama

Annex 28

JOINT COMMUNICATION FROM THE GOVERNMENTS OF COLOMBIA, COSTA RICA AND PANAMA, 5 FEBRUARY 2014

(Available at: http://www.un.org/depts/los/clcs_new/submissions_files/submission_nic_66_2013.htm)

5 February 2014

Sir,

We, representatives of the Governments of Colombia, Costa Rica and Panama, have the honour to refer to Nicaragua's communication of 20 December 2013, in response to the objection raised by our countries to its submission to the Commission on the Limits of the Continental Shelf, contained in the note dated 23 September 2013 addressed to the Secretary-General, in which Nicaragua affirms, inter alia, that such submission, which refers to the outer limits of its so-called continental shelf beyond 200 miles measured from the coast of Nicaragua, is "without prejudice to the delimitation of the continental shelf between Colombia, Costa Rica and Panama" .

Nicaragua's assertion in the abovementioned note is erroneous, as its submission does indeed affect the rights of our States .

Without prejudice to what each of our countries have stated separately Nicaragua's submission to the Commission on the Limits of the Continental Shelf violates the rights and ocean space of our countries, including their continental shelf; it also peaceful coexistence in the western Caribbean Sea region .

In view of the foregoing, we reiterate the concern of our Governments over Nicaragua's submission and request that you to convey to the Commission on the Limits of the Continental Shelf our strong objection thereto and our opposition to the Commission considering or ruling on Nicaragua's submission .

Ban Ki-Moon

Secretary-General of the United Nations

Moreover, we strongly deny the claim that our States have threatened Nicaragua with the use of force as contained in the note from Nicaragua . That assertion is baseless . The Republic of Nicaragua is the only country that has been a source of instability in the region, through acts contrary to international law .

Lastly, we trust that the United Nations, in keeping with its goal of maintaining international peace and security, will take this concern and our joint declaration into account .Likewise, we request Your Excellency to transmit a copy of this letter to the Commission on the Limits of the Continental Shelf and to all States Members of the Organization .

We take this opportunity to convey to you the renewed assurances of our highest consideration .

(*Signed*) María Ángela **Holguín Cuéllar**

Minister for Foreign Affairs

(*Signed*) José Enrique **Castillo Barrantes**

Minister for Foreign Affairs of Costa Rica

(*Signed*) Francisco **Álvarez de Soto**

Minister for Foreign Affairs of Panama

Annex 29

NOTE FROM THE PERMANENT MISSION OF NICARAGUA TO THE UNITED NATIONS, 20 DECEMBER 2013

(Available at: http://www.un.org/depts/los/clcs_new/submissions_files/submission_nic_66_2013.htm)

Non Official Translation

New York, 20 December 2013

Secretary General,

I have the honour to address Your Excellency regarding the letter dated 23 September 2013 addressed to Your Excellency by the Heads of States of the Republic of Colombia, Costa Rica and Panama regarding Nicaragua's Submission to the Commission on the Limits of the Continental Shelf, asserting that Nicaragua's submission affects extensive areas belonging to those countries.

Nicaragua wishes to recall that its Submission to the Commission on the Limits of the Continental Shelf was made pursuant to Nicaragua's obligations as a State Party to the United Nations Convention on the Law of the Sea. As Nicaragua observes in the Executive Summary of its Submission, in accordance with article 76(10) of the United Nations Convention on the Law of the Sea, the Submission is made without prejudice to the question of the delimitation of the continental shelf between Nicaragua and neighbouring States. Consequently, that submission is without prejudice to the delimitation of the continental shelf between Colombia, Costa Rica and Panama.

Furthermore, Nicaragua wishes to recall that in accordance with Article 76 and Annex II of the 1982 United Nations Convention on the Law of the Sea, the Commission on the Limits of the Continental Shelf is concerned only with the limits of the continental shelf beyond 200 nautical miles from the baselines of the coastal State making a Submission. Nicaragua's Submission is in accordance with those provisions of the United Nations Convention on the Law of the Sea.

Nicaragua notes that for more than thirty years Costa Rica has identified the tripoint where its maritime boundaries intersect with those of neighbouring States as latitude 10° 49' 00" North, longitude 81° 26' 08.2" West, which lies within 200 nautical miles of the coasts of both Costa Rica and Nicaragua.

Furthermore, Nicaragua also notes that it does not claim any areas of continental shelf which appertain to Panama in accordance with the Maritime Delimitation Treaty between Panama and the Republic of Colombia in force as of 30 November 1977.

H.E. Ban Ki-Moon
Secretary General
to the United Nations
United Nations
New York

In light of the above it is evident that Nicaragua's compliance with its international obligations as a state party to a United Nation's convention -obligations also recognized as such by the principal judicial organ of this organization in its 19 November 2012 Judgment- cannot be considered as a threat to regional peace and security; just as the 66 submissions made so far globally, 8 of them appertaining to the Latin American and Caribbean Region, cannot be regarded as such either, including Costa Rica's own submission in the Pacific.

Nicaragua as a founding member of the United Nations has always resorted to the peaceful settlement of disputes, thus throughout history Nicaragua has been at the forefront of international law even at the hardest moments when its sovereignty and territorial integrity were being violated from neighbouring territories.

Likewise, Nicaragua has always strived for the unity and integration of Latin America and the Caribbean, and as a full member of regional and subregional organizations Nicaragua continues to behave consistently with those objectives.

Nicaragua takes this opportunity to recall that the Judgments of the International Court of Justice are final and binding for the parties to a dispute, and no State can use provisions of its internal law, including its constitution, to avoid its obligations under international law. Such behaviour and the threat to use force are both breaches of international law that entail the state's responsibility.

Finally, Nicaragua reaffirms that it remains committed to delimiting its maritime boundaries, including its continental shelf boundaries with neighbouring States in accordance with international law, including the judgments of the International Court of Justice, which are final and binding.

[signed]
Jaime Hermida Castillo
Chargé d'affaris, a.i.
Permanent Mission of the Republic of Nicaragua

MISION PERMANENTE DE NICARAGUA
ANTE LAS NACIONES UNIDAS
820 SECOND AVENUE - 8TH FLOOR
NEW YORK, NY 10017
(212) 490-7997

Nueva York, 20 de diciembre de 2013

Secretario General,

Tengo el honor de dirigirme a Vuestra Excelencia en relación con la carta fechada 23 de septiembre 2013 dirigida a Vuestra Excelencia por los Jefes de Estado de la República de Colombia, Costa Rica y Panamá, en relación a la presentación de información por Nicaragua ante la Comisión de Límites de la Plataforma Continental, afirmando que la presentación de Nicaragua afecta amplias zonas pertenecientes a dichos países.

Nicaragua desea recordar que su presentación ante la Comisión de Límites de la Plataforma Continental se hizo de conformidad con las obligaciones de Nicaragua como Estado Parte de la Convención de Naciones Unidas sobre Derecho del Mar. Tal y como Nicaragua ha señalado en el Resumen de su presentación, en concordancia con el Artículo 76 (10) de la Convención de las Naciones Unidas sobre el Derecho del Mar, la presentación se ha hecho sin prejuicio de la cuestión de la delimitación de la plataforma continental entre Nicaragua y países vecinos. Consecuentemente, dicha presentación es sin prejuicio a la delimitación de la plataforma continental entre Colombia, Costa Rica y Panamá.

Además, de conformidad con el Artículo 76 y el Anexo II de la Convención de Naciones Unidas sobre el Derecho del Mar, la Comisión de Límites de la Plataforma Continental se ocupa únicamente de los límites del propio estado ribereño que presenta la información sobre los límites de su plataforma continental que se encuentran a más de 200 millas náuticas contadas desde las líneas base.. La presentación de información de Nicaragua está en plena concordancia con esas provisiones de la Convención de Naciones Unidas sobre el Derecho del Mar.

Nicaragua observa que durante más de treinta años, Costa Rica ha identificado el punto de intersección triple en donde sus límites marítimos se intersectan con aquellos de los Estados vecinos con las siguientes coordenadas Latitud 10° 49' 00" Norte, Longitud 81° 26' 08.2" Oeste, las cuales se encuentra dentro de las 200 millas náuticas de las costas de Costa Rica y de Nicaragua.

S.E. Ban Ki-Moon
Secretario General
ante las Naciones Unidas
Naciones Unidas
Nueva York

Nicaragua también hace notar que no reclama ninguna área de la plataforma continental que pertenezca a Panamá, de conformidad con el Tratado de Delimitación Marítima entre Panamá y la República de Colombia vigente desde el 30 de noviembre de 1977.

En vista de lo anterior, es evidente que el cumplimiento de Nicaragua con sus obligaciones internacionales como Estado Parte en una convención de Naciones Unidas - obligaciones que en la Sentencia del 19 de Noviembre 2012 han sido reconocidas como tales por el órgano judicial principal de esta organización – no puede ser considerado como una amenaza a la paz y la seguridad regional; al igual que las 66 presentaciones realizadas hasta el momento a nivel mundial, 8 de ellas pertenecientes a la región de América Latina y el Caribe, no pueden considerarse como tal, incluyendo la presentación de Costa Rica en el Pacífico.

Nicaragua, como miembro fundador de las Naciones Unidas siempre ha recurrido a la solución pacífica de controversias, y por ende a lo largo de su historia siempre ha estado a la vanguardia del derecho internacional, aún en los momentos más difíciles cuando su soberanía e integridad territorial estaban siendo violadas desde territorios vecinos.

De igual forma, Nicaragua siempre ha luchado por la unidad e integración de América Latina y el Caribe, y como miembro pleno de las organizaciones regionales y subregionales, Nicaragua continúa comportándose de manera consistente con esos objetivos.

Nicaragua toma esta oportunidad para recordar que las sentencias de la Corte Internacional de Justicia son definitivas y de obligatorio cumplimiento, y que ningún estado puede utilizar su legislación nacional, incluyendo su Constitución, como excusa para evitar cumplir sus obligaciones derivadas del derecho internacional. Tal comportamiento y la amenaza del uso de la fuerza son quebrantamientos del derecho internacional que conllevan la responsabilidad del estado.

Finalmente, Nicaragua permanece comprometida a que la delimitación de sus fronteras marítimas con naciones vecinas, incluyendo la de su plataforma continental, sean llevadas a cabo de conformidad con el derecho internacional, incluyendo las sentencias de la Corte Internacional de Justicia, las cuales son definitivas y de ineludible cumplimiento.

Jaime Hermida Castillo
Chargé d'affaris, a.i.
Misión Permanente de la Republica de Nicaragua

Annex 30

NOTE MINIC-NU-047-13 FROM THE PERMANENT MISSION OF NICARAGUA TO THE UNITED NATIONS, 20 DECEMBER 2013

(Available at: http://www.un.org/depts/los/clcs_new/submissions_files/submission_nic_66_2013.htm)

Non Official Translation

MINIC-NU-047-13

The Permanent Mission of Nicaragua to the United Nations presents its compliments to the Secretary General of the United Nations and has the honour to refer to the communication submitted by the Permanent Mission of Colombia to the United Nations on 24 September 2013 regarding Nicaragua's Submission to the Commission on the Limits of the Continental Shelf. The Republic of Colombia asserts that Nicaragua's Submission refers to submarine areas in the Caribbean Sea that belong to Colombia under international law; but Colombia does not identify any such areas.

In that regard, Nicaragua reiterates the content of its Submission to the Commission on the Limits of the Continental Shelf, which was made pursuant to its obligations as a State Party to the United Nations Convention on the Law of the Sea. Nicaragua's Submission does not in any way encroach upon any rights over submarine areas to which Colombia is entitled under international law. As Nicaragua observes in the Executive Summary of its Submission, in accordance with article 76(10) of the United Nations Convention on the Law of the Sea, the Submission is made without prejudice to the question of the delimitation of the continental shelf between Nicaragua and neighbouring States.

Nicaragua remains committed to delimiting its maritime boundaries, including its continental shelf boundaries with neighbouring States in accordance with international law, including the judgments of the International Court of Justice, which are final and binding.

The Permanent Mission of Nicaragua to the United Nations avails itself of this opportunity to renew to the Secretary General of the United Nations the assurances of its highest consideration.

New York, 20 December 2013

H.E. Ban Ki-Moon
Secretary General
to the United Nations
United Nations
New York

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MINIC-NU-047-13

La Misión Permanente de Nicaragua ante Naciones Unidas presenta sus atentos saludos al Secretario General de Naciones Unidas y tiene el honor de referirse a la comunicación enviada por la Misión Permanente de Colombia ante Naciones Unidas el 24 de Septiembre del 2013 en relación a la presentación de información por Nicaragua ante la Comisión de Límites de la Plataforma Continental. La República de Colombia afirma que la presentación de Nicaragua se refiere a áreas submarinas en el Mar Caribe que pertenecen a Colombia bajo el derecho internacional; pero Colombia no identifica ninguna de dichas áreas.

A este respecto, Nicaragua reitera el contenido de su presentación ante la Comisión de Límites de la Plataforma Continental, que se hizo de conformidad con sus obligaciones como Estado Parte de la Convención de Naciones Unidas sobre el Derecho del Mar. La presentación de Nicaragua no usurpa de ninguna manera, cualesquiera derechos sobre áreas submarinas que pueda tener Colombia bajo el derecho internacional. Tal y como Nicaragua ha señalado en el Resumen de su presentación, en concordancia con el Artículo 76 (10) de la Convención de las Naciones Unidas sobre el Derecho del Mar, la presentación se ha hecho sin prejuicio de la cuestión de la delimitación de la plataforma continental entre Nicaragua y países vecinos.

Nicaragua permanece comprometida a que la delimitación de sus fronteras marítimas con naciones vecinas, incluyendo la de su plataforma continental, sea llevada a cabo de conformidad con el derecho internacional, incluyendo las sentencias de la Corte Internacional de Justicia, las cuales son definitivas y de obligatorio cumplimiento.

La Misión Permanente de Nicaragua ante las Naciones Unidas aprovecha esta oportunidad para reiterar al Secretario General de las Naciones Unidas las seguridades de su más alta y distinguida consideración.

Nueva York, 20 de diciembre de 2013

S.E. Ban Ki-Moon
Secretario General
ante las Naciones Unidas
Naciones Unidas
Nueva York

MISION PERMANENTE
REPUBLICA DE NICARAGUA
AMERICA CENTRAL
NACIONES UNIDAS

Annex 31

NOTE MINIC-NU-048-13 FROM THE PERMANENT MISSION OF NICARAGUA TO THE UNITED NATIONS, 20 DECEMBER 2013

(Available at: http://www.un.org/depts/los/clcs_new/submissions_files/submission_nic_66_2013.htm)

Non Official Translation

MINIC-NU-048-13

The Permanent Mission of Nicaragua to the United Nations presents its compliments to the Secretary General of the United Nations and has the honour to refer to the communication submitted by the Permanent Mission of Costa Rica to the United Nations on 15 July 2013 regarding Nicaragua's Submission to the Commission on the Limits of the Continental Shelf. Costa Rica states that it has an unresolved maritime dispute with Nicaragua in so far as the maritime areas claimed by Nicaragua encroach upon maritime areas belonging to Costa Rica under international law.

In that regard, Nicaragua state that its Submission does not in any way encroach upon any rights over maritime areas to which Costa Rica is entitled under international law, and thus reiterates the content of its Submission to the Commission on the Limits of the Continental Shelf, which was made pursuant to its obligations as a State Party to the United Nations Convention on the Law of the Sea. In accordance with Article 76 and Annex II of the 1982 United Nations Convention on the Law of the Sea, the Commission on the Limits of the Continental Shelf is concerned only with the limits of the continental shelf beyond 200 nautical miles from the baselines of the coastal State making a Submission. Nicaragua's Submission is in accordance with those provisions of the United Nations Convention on the Law of the Sea.

Nicaragua notes that for more than thirty years Costa Rica has identified the tripoint where its maritime boundaries intersect with those of neighbouring States as latitude 10° 49' 00" North, longitude 81° 26' 08.2" West, which lies within 200 nautical miles of the coasts of both Costa Rica and Nicaragua. Moreover, as Nicaragua observes in the Executive Summary of its Submission, in accordance with article 76(10) of the United Nations Convention on the Law of the Sea, the Submission is made without prejudice to the question of the delimitation of the continental shelf between Nicaragua and neighbouring States.

H.E. Ban Ki-Moon
Secretary General
to the United Nations
United Nations
New York

Nicaragua remains committed to delimiting its maritime boundaries, including its continental shelf boundaries with neighbouring States in accordance with international law, including the judgments of the International Court of Justice.

The Permanent Mission of Nicaragua to the United Nations avails itself of this opportunity to renew to the Secretary General of the United Nations the assurances of its highest consideration.

New York, 20 December 2013

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MINIC-NU-048-13

La Misión Permanente de Nicaragua ante Naciones Unidas presenta sus atentos saludos al Secretario General de Naciones Unidas y tiene el honor de referirse a la comunicación enviada por la Misión Permanente de Costa Rica ante Naciones Unidas el 15 de julio del 2013 en relación a la presentación de información por Nicaragua ante la Comisión de Límites de la Plataforma Continental. Costa Rica afirma que tiene un diferendo marítimo inconcluso con Nicaragua, en tanto que las áreas marítimas reclamadas por Nicaragua, invaden áreas marítimas pertenecientes a Costa Rica bajo el derecho internacional.

A este respecto, Nicaragua reafirma que su presentación no usurpa de ninguna manera, cualesquiera derechos sobre áreas marítimas que pueda tener Costa Rica bajo el derecho internacional, y por lo tanto reitera el contenido de su presentación ante la Comisión de Límites de la Plataforma Continental, que se hizo de conformidad con sus obligaciones como Estado Parte de la Convención de Naciones Unidas sobre el Derecho del Mar. De conformidad con el Artículo 76 y el Anexo II de la Convención de Naciones Unidas sobre el Derecho del Mar, la Comisión de Límites de la Plataforma Continental se ocupa únicamente de los límites del propio estado ribereño que presenta la información sobre los límites de su plataforma continental que se encuentran a más de 200 millas náuticas contadas desde las líneas base. La presentación de información de Nicaragua está en plena concordancia con esas provisiones de la Convención de Naciones Unidas sobre el Derecho del Mar.

Nicaragua observa que durante más de treinta años, Costa Rica ha identificado el punto de intersección triple en donde sus límites marítimos se intersectan con aquellos de los Estados vecinos con las siguientes coordenadas Latitud 10° 49' 00" Norte, Longitud 81° 26' 08.2" Oeste, las cuales se encuentra dentro de las 200 millas náuticas de las costas de Costa Rica y de Nicaragua. Es más, Nicaragua ha señalado en el Resumen de su presentación, que en concordancia con el Artículo 76 (10) de la Convención de las Naciones Unidas sobre el Derecho del Mar, la presentación se ha hecho sin prejuicio de la cuestión de la delimitación de la plataforma continental entre Nicaragua y países vecinos.

S.E. Ban Ki-Moon
Secretario General
ante las Naciones Unidas
Naciones Unidas
Nueva York

Nicaragua permanece comprometida a que la delimitación de sus fronteras marítimas con naciones vecinas, incluyendo la de su plataforma continental, sean llevadas a cabo de conformidad con el derecho internacional, incluyendo las sentencias de la Corte Internacional de Justicia.

La Misión Permanente de Nicaragua ante las Naciones Unidas aprovecha esta oportunidad para reiterar al Secretario General de las Naciones Unidas las seguridades de su más alta y distinguida consideración.

Nueva York, 20 de diciembre de 2013

Annex 32

NOTE MINIC-NU-049-13 FROM THE PERMANENT MISSION OF NICARAGUA TO THE UNITED NATIONS, 20 DECEMBER 2013

(Available at: http://www.un.org/depts/los/clcs_new/submissions_files/submission_nic_66_2013.htm)

Non Official Translation

MINIC-NU-049-13

The Permanent Mission of Nicaragua to the United Nations presents its compliments to the Secretary General of the United Nations and has the honour to refer to the communication submitted by the Permanent Mission of Jamaica to the United Nations on 12 September 2013 regarding Nicaragua's Submission to the Commission on the Limits of the Continental Shelf, in which Jamaica, having regard to the potential areas of continental shelf that Nicaragua is seeking to establish through that Submission, advises of the overlapping claims in the areas of exclusive economic zone appertaining to Jamaica.

In that respect, Nicaragua recalls that its Submission to the Commission on the Limits of the Continental Shelf was made pursuant to Nicaragua's obligations as a State Party to the United Nations Convention on the Law of the Sea.

Furthermore, Nicaragua's Submission does not in any way encroach upon any rights over submarine areas to which Jamaica is entitled under international law. As Nicaragua observes in the Executive Summary of its Submission, in accordance with article 76(10) of the United Nations Convention on the Law of the Sea, the Submission is made without prejudice to the question of the delimitation of the continental shelf between Nicaragua and neighbouring States. Nicaragua does not claim any areas of continental shelf which appertain to Jamaica in accordance with the Maritime Delimitation Treaty between Jamaica and the Republic of Colombia, dated 12 November 1993.

Nicaragua remains committed to delimiting its maritime boundaries, including its continental shelf boundaries with neighbouring States in accordance with international law, including the judgments of the International Court of Justice; and to the operation of fair, practical and stable arrangements for the exploitation of seabed resources that straddle continental shelf boundaries.

The Permanent Mission of Nicaragua to the United Nations avails itself of this opportunity to renew to the Secretary General of the United Nations the assurances of its highest consideration.

New York, 20 December 2013

H.E. Ban Ki-Moon
Secretary General
to the United Nations
United Nations
New YorK

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MINIC-NU-049-13

La Misión Permanente de Nicaragua ante Naciones Unidas presenta sus atentos saludos al Secretario General de Naciones Unidas y tiene el honor de referirse a la comunicación con fecha 12 de septiembre 2013 enviada por la Misión Permanente de Jamaica ante Naciones Unidas en relación a la presentación de información por Nicaragua ante la Comisión de Límites de la Plataforma Continental, en la cual Jamaica, teniendo en cuenta las áreas potenciales de plataforma continental que busca establecer Nicaragua a través de dicha presentación, informa de la reclamaciones superpuestas en las áreas de la zona económica exclusiva que pertenecen a Jamaica.

A ese respecto, Nicaragua recuerda que su presentación ante la Comisión de Límites de la Plataforma Continental se hizo de conformidad con las obligaciones de Nicaragua como Estado Parte de la Convención de Naciones Unidas sobre Derecho del Mar.

Además, la presentación de Nicaragua no usurpa, de ninguna manera cualesquiera derechos sobre áreas submarinas que pueda tener Jamaica bajo el derecho internacional. Tal y como Nicaragua ha señalado en el Resumen de su presentación, en concordancia con el Artículo 76 (10) de la Convención de las Naciones Unidas sobre el Derecho del Mar, la presentación se ha hecho sin prejuicio de la cuestión de la delimitación de la plataforma continental entre Nicaragua y países vecinos. Nicaragua no reclama ninguna área de la plataforma continental que pertenezca a Jamaica de conformidad con el Tratado de Delimitación Marítima entre Jamaica y la República de Colombia con fecha del 12 de noviembre de 1993.

S.E. Ban Ki-Moon
Secretario General
ante las Naciones Unidas
Naciones Unidas
Nueva York

Nicaragua permanece comprometida a que la delimitación de sus fronteras marítimas con naciones vecinas, incluyendo la de su plataforma continental, sean llevadas a cabo de conformidad con el derecho internacional, incluyendo las sentencias de la Corte Internacional de Justicia; y con la aplicación de acuerdos justos, prácticos y estables para la explotación de los recursos del lecho marino que se extienden por los límites de la plataforma continental.

La Misión Permanente de Nicaragua ante las Naciones Unidas aprovecha esta oportunidad para reiterar al Secretario General de las Naciones Unidas las seguridades de su más alta y distinguida consideración.

Nueva York, 20 de diciembre de 2013

Annex 33

NOTE MINIC-NU-050-13 FROM THE PERMANENT MISSION OF NICARAGUA TO THE UNITED NATIONS, 20 DECEMBER 2013

(Available at: http://www.un.org/depts/los/clcs_new/submissions_files/submission_nic_66_2013.htm)

Non Official Translation

MINIC-NU-050-13

The Permanent Mission of Nicaragua to the United Nations presents its compliments to the Secretary General of the United Nations and has the honour to refer to the communication submitted by the Permanent Mission of Panama to the United Nations on 30 September 2013 regarding Nicaragua's Submission to the Commission on the Limits of the Continental Shelf, in which Panama advises of an affectation to its maritime space.

In that respect, Nicaragua recalls that its Submission to the Commission on the Limits of the Continental Shelf was made pursuant to Nicaragua's obligations as a State Party to the United Nations Convention on the Law of the Sea.

Furthermore, Nicaragua's Submission does not in any way encroach upon any rights over maritime areas to which Panama is entitled under international law. As Nicaragua observes in the Executive Summary of its Submission, in accordance with article 76(10) of the United Nations Convention on the Law of the Sea, the Submission is made without prejudice to the question of the delimitation of the continental shelf between Nicaragua and neighbouring States. Nicaragua does not claim any areas of continental shelf which appertain to Panama in accordance with the Maritime Delimitation Treaty between Panama and the Republic of Colombia in force as of 30 November 1977.

Nicaragua remains committed to delimiting its maritime boundaries, including its continental shelf boundaries with neighbouring States in accordance with international law, including the judgments of the International Court of Justice.

The Permanent Mission of Nicaragua to the United Nations avails itself of this opportunity to renew to the Secretary General of the United Nations the assurances of its highest consideration.

New York, 20 December 2013

H.E. Ban Ki-Moon
Secretary General
to the United Nations
United Nations
New York

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MINIC-NU-050-13

La Misión Permanente de Nicaragua ante Naciones Unidas presenta sus atentos saludos al Secretario General de Naciones Unidas y tiene el honor de referirse a la comunicación del 30 de septiembre 2013 enviada por la Misión Permanente de Panamá ante Naciones Unidas en relación a la presentación de información por Nicaragua ante la Comisión de Límites de la Plataforma Continental, en la cual Panamá advierte de una afectación a sus espacios marítimos.

En ese sentido, Nicaragua recuerda que su presentación ante la Comisión de Límites de la Plataforma Continental se hizo de conformidad con las obligaciones de Nicaragua como Estado Parte de la Convención de Naciones Unidas sobre Derecho del Mar.

Además, la presentación de Nicaragua no usurpa, de ninguna manera, cualesquiera derechos sobre áreas submarinas que pueda tener Panamá bajo el derecho internacional. Tal y como Nicaragua ha señalado en el Resumen de su presentación, en concordancia con el Artículo 76 (10) de la Convención de las Naciones Unidas sobre el Derecho del Mar, la presentación se ha hecho sin prejuicio de la cuestión de la delimitación de la plataforma continental entre Nicaragua y países vecinos. Nicaragua no reclama ninguna área de la plataforma continental que pertenezca a Panamá de conformidad con el Tratado de Delimitación Marítima entre Panamá y la República de Colombia vigente desde el 30 de noviembre de 1977.

Nicaragua permanece comprometida a que la delimitación de sus fronteras marítimas con naciones vecinas, incluyendo la de su plataforma continental, sean llevadas a cabo de conformidad con el derecho internacional, incluyendo las sentencias de la Corte Internacional de Justicia.

La Misión Permanente de Nicaragua ante las Naciones Unidas aprovecha esta oportunidad para reiterar al Secretario General de las Naciones Unidas las seguridades de su más alta y distinguida consideración.

Nueva York, 20 de diciembre de 2013

S.E. Ban Ki-Moon
Secretario General
ante las Naciones Unidas
Naciones Unidas
Nueva York

MISION PERMANENTE
REPUBLICA DE NICARAGUA
AMERICA CENTRAL
NACIONES UNIDAS

Annex 34

AFFIDAVIT BY MR. MILFORD DANLEY MCKELLER HUDGSON, 10 AUGUST 2017

(Archives of the Colombian Ministry of Foreign Affairs)

SINGLE NOTARY PUBLIC OF THE NOTARY CIRCUIT OF SAN ANDRES ISLAND
ARCHIPIÉLAGO DEPARTMENT OF SAN ANDRÉS, PROVIDENCIA AND SANTA CATALINA==========
ADDRESS: AVENIDA FRANCISCO NEWBALL- CENTRO COMERCIAL DANN LOCALES 133- 134- PHONE NUMBER – 5126119- TELEFAX- 5122112- SAN ANDRES-ISLAND-COLOMBIA==========

RECEPCION OF AFFIDAVIT

In the city of San Andrés, Island, provincial capital of the Archipelago Department of San Andrés, Providencia and Santa Catalina, Republic of Colombia, on the TENTH (10) day of **AUGUST** of the year two-thousand seventeen (2017), before the Single Notary Public of the San Andrés Island Notary Circuit, the functions of which are discharged by **RAFAEL MEZA ACOSTA, MILFORD DANLEY MCKELLER HUDGSON,** identified with national identification card number 15 .243 .624issued in San Andrés, appeared in order to render an affidavit and stated:-**FIRST:**-That all the statements set out in this instrument are rendered under oath and aware of the implications of lying under oath.-**SECOND**:-That he has no impediment to render this affidavit, which he provides under his sole and full civil, criminal or disciplinary liability.-**THIRD:**-That the statements rendered herein are given freely and voluntarily, and that I have personal knowledge thereof and can attest to them by having witnessed them first-hand.-**FOURTH:**-

That this affidavit was rendered to be submitted and delivered to the Ministry of Foreign Affairs of Colombia with the purpose of its being included as part of the annexes to the Colombian pleadings before the International Court of Justice, pursuant to the provisions of Decree 1557 of 14 July 1989 in accordance with the General Code of the Proceedings and complementary provisions . **-FIFTH:- GENERAL LEGAL IDENTIFYING INFORMATION**- My name is Milford Danley Mckeller Hudgson, I am fifty-four 54 years old, I was born in San Andrés Island and I live in the following address: San Luis sector, Tom Hooker neighbourhood, profession or occupation fisherman, civil status single .**SIXTH:-** As stated, I declare under oath that my name is Milford Danley Mckeller Hudgson, I have worked as an artisanal fisherman for 15 to 20 years. When we go on fishing expeditions we usually go to Roncador, Serrana and Quitasueño. We fish deep water groupers such as "yellow-eye" and "mandilous". The last time we went fishing was last week . First we went to Serrana and then to Roncador. We did not sleep in the cays because the boat we used is comfortable . The ones who sleep in the cays are fishermen arriving in smaller boats with outboard engines . Normally, those boats come from Providencia, because it is closer . In Serrana there are various cays: "Triangle", "Anchor Cay" and "Bird Island". So those guys fish in all those cays from North to South . Those islands are important to me because there we find most of the products . Fishing represents our daily subsistence in San Andrés and Providencia . Cays are also important for the fishes and other animals since they produce food for them. We normally travel

once a month . Those cays belong to the Raizal population, because they represent they place to obtain our daily subsistence . Besides, my father, Hernández McKeller, tells me that in the past they used to sail from San Andrés up to the Northern cays, usually Roncador and Serrana . Particularly, they used to go there for the spawning season to get eggs from birds such as the "Man-a-War" bird (Albatross) and Bubi bird (Gannet) . They would also bring salty turtle and fish meat, since back then nobody used ice or anything . In Serrana, close to where the Navy's helicopter lands, there is a place which gets full of fresh water . Normally, during the dry season it goes completely dry, but when it rains it gets full of fresh water . When I go ashore in that cay, I go there to splash water on and refresh myself . This place is in the cay where the soldiers are . If we need water we ask the soldiers for some, but if it was necessary that water could be drank without a problem . If I had to choose one cay to live, I would choose Serrana, specially the cay where the soldiers are, since it is the biggest one and has many coconut trees. It also has "lavinda" (lavender), a sort of plant which we use to prepare tea to drink . I believe that if someone wanted to grow crops in Serrana they could do it because it is the same kind of soil that the Southern cays have, that is Bolívar (East-South-East) and Albuquerque (South-South-West) and other fishermen have managed to grow crops in there . For example, in Albuquerque they are growing basil and yam right now . They also are raising hens in Albuquerque and in Bolívar . So if one can grow crops in Bolivar and Albuquerque it can be done in the northern cays as well because

is the same kind of soil . Especially in Serrana . The sea of the archipelago means so many things for the Raizales. We fish to eat from it and also to sell the products and sustain our families . It also has a religious meaning for us . The sea of San Andrés, Providencia and Santa Catalina and all the northern and southern cays . belong to us, the Raizales . I see the Archipelago as one single territory .I do not see it detached with Providencia on one side, the northern cays on another side, San Andrés on a different side and the Southern cays on another side .No .For me is just the same thing .

The Affiant displayed sound mind, expressed himself clearly and signs the present declaration writ with the undersigned Notary Public, once read and approved, his right index fingerprint was set .

NOTES ._____

[*Signed*]

The Affiant: **MILFORD DANLEY MCKELLER HUDGSON**

CC .[*Colombian National ID Card No.*] 15 .243 .624 .

[*Signed*]

The Notary Public

RAFAEL MEZA ACOSTA

ERTSW.

[*Signature and stamp*]

_____

THE WRIT ENDS HERE

[*Document bears stamp reading:*
That the biometric system mandated by law was not used and therefore there was no fingerprint digitalization for this act, due to the following reasons:
(...)
4. Lack of connectivity.
Article 3. Resolution 6457 of 2015 S.N.]

Annex 35

AFFIDAVIT BY MR. BARRINGTON ESPEDITO WATLER ROBINSON, 21 JULY 2017

(Archives of the Colombian Ministry of Foreign Affairs)

REPUBLIC OF COLOMBIA
SINGLE NOTARY PUBLIC OF THE NOTARY CIRCUIT OF PROVIDENCIA ISLAND
ARCHIPELAGO DEPARTAMENT OF SAN ANDRÉS, PROVIDENCIA AND SANTA CATALINA - COLOMBIA

RECEPTION OF AFFIDAVIT

SINGLE NOTARY PUBLIC OF THE PROVIDENCIA ISLAND NOTARY CIRCUIT: In the Island of Providencia, municipality of the Archipelago Department of San Andrés, Providencia and Santa Catalina, Republic of Colombia, on the twenty-first (21) day of **JULY** of the year two thousand and seventeen (2017), before me, **MARIO RAFAEL MIRANDA MORALES,** Single Notary Public of the Providencia Island Notary Circuit, **BARRINGTON ESPEDITO WATLER ROBINSON** appeared, identified as stated below his signature, in order to render an affidavit and stated: -**FIRST:**-That all the statements set out in this instrument are rendered under oath and aware of the legal implications entailed by lying under oath.- **SECOND:**-That he has no impediment whatsoever to render this affidavit, which he provides under his sole and full responsibility.-**THIRD:**-That the statements rendered herein, given freely and voluntarily, relate to facts that he attests to by having witnessed them first-hand.-**FOURTH:**-That this affidavit was rendered to be submitted and delivered to the Ministry of Foreign Affairs of Colombia with the purpose of its being included as part of the annexes to the Colombian

pleadings before the International Court of Justice, pursuant to the provisions of Decree 1557 of 14 July 1989 in accordance with the General Code of the Proceedings and complementary provisions .-**FIFTH**:-My name is as stated above, Barrington Espedito Watler Robinson, I am eighty-five (85) years old, I was born in Providencia Island, I have always lived there and I reside in the Lazzy Hill sector, profession or occupation farmer and fisherman, civil status widower, bearer of National ID number 990 .567 issued in Providencia Island . -**SIXTH**: - As stated, I declare under oath that: My name is Barrington Espedito Watler Robinson, I am 85 years old, I am a farmer and fisherman, I was born in Providencia Island . I have been a fisherman since I was very young . I have fished around Providencia and Santa Catalina and also in the Northern Cays . We used to go to Serrana and Roncador to look for fish and turtles .There were fishermen in the cays almost every time we went there, they came either from San Andrés or from Providencia and Santa Catalina islands, and we found even foreigners who fish in those areas. We used to go in a boat whose captain was Eliseo Hawkins and which carried at least four catboats (sailing boats). We slept in the Cays, we fished in the catboats in 6-hours long working days .Each day we caught at least 200 pounds of fish, fishing with nylon, and 3 turtles. We used to stay there for about 15 to 20 days, although we have stayed there for longer periods of two or three months .Before going to the cays we would bake Soda Cake and Sugar Cake .In Serrana there is a water well used to take showers but water can also be drunk if necessary .If it rained we also collected water .

We brought firewood and built a hut with palm leaves and sticks . For breakfast we ate Soda Cake or Sugar Cake with a mint tea or a lavender tea . For lunch we prepared fish in different ways and ate it with food like yucca or yam . At night we used to play dominoes and cards as a way to entertain ourselves. We slept in beds made of sticks and plantain leaves brought from Providencia Island .Our ancestors used to visit the Northern Cays, especially Serrana .A boat would normally leave them there and pick them up afterwards . They used to fish around the coasts or went there when turtles spawned to catch the eggs . I believe that it is possible to live in Serrana or Roncador because we islanders have been taught to take advantage of everything around us and to live only with the necessary minimum .I remember one time when I had to sail in a catboat along my fishing partner, Wilberson Archbold, from Roncador to Providencia Island . This event occurred after we had an argument with the captain of larger boat who did not allow us to get aboard with a turtle we had caught . It took us several days to arrive because we only had the sails as propulsion mechanism and the stars and the sun as instruments of navigation . For the record, it is issued in Providencia Island, on the twenty-first (21) day of July of two-thousand seventeen (2017) . Dues $12 .200 .oo Resolution 0451 of 2017 .

[*Signed*]
AFFIANT:
BARRINGTON ESPEDITO WATLER ROBINSON
C .C.[*Colombian National ID Card*] N° 990 .567of Providencia Island

[*Signed*]
[*Stamped and initialled*]
THE SINGLE NOTARY PUBLIC OF THE CIRCUIT
MARIO RAFAEL MIRANDA MORALES

[*Signed*]

THE WRIT ENDS HERE

[*Document bears stamp reading:*

That the biometric system mandated by law was not used and therefore there was no fingerprint digitalization for this act, due to the following reasons:
(...)
6. Other: Domicile
Article 3. Resolution [*illegible*] *of 2015*]

Annex 36

AFFIDAVIT BY MR. ARTIMAS ALCIDES BRITTON DAVIS, 21 JULY 2017

(Archives of the Colombian Ministry of Foreign Affairs)

REPUBLIC OF COLOMBIA
SINGLE NOTARY PUBLIC OF THE NOTARY CIRTUIT
OF PROVIDENCIA ISLAND
ARCHIPELAGO DEPARTAMENT OF SAN ANDRÉS,
PROVIDENCIA AND SANTA CATALINA - COLOMBIA

RECEPTION OF AFFIDAVIT

SINGLE NOTARY PUBLIC OF THE PROVIDENCIA ISLAND NOTARY CIRCUIT: In the Island of Providencia, municipality of the Archipelago Department of San Andrés, Providencia and Santa Catalina, Republic of Colombia, on the twenty-first (21) day of JULY of the year two thousand and seventeen (2017), before me, **MARIO RAFAEL MIRANDA MORALES,** Single Notary Public of the Providencia Island Notary Circuit, **ARTIMAS ALCIDES BRITTON DAVIS** appeared, identified as stated below his signature, in order to render an affidavit and stated: -**FIRST:**-That all the statements set out in this instrument are rendered under oath and aware of the legal implications entailed by lying under oath -**SECOND:**-That he has no impediment whatsoever to render this affidavit, which he provides under his sole and full responsibility -**THIRD:**-That the statements rendered herein, given freely and voluntarily, relate to facts that he attests to by having witnessed them first-hand -**FOURTH:**-That this affidavit was rendered to be submitted and delivered to the Ministry of Foreign Affairs of Colombia with the purpose of its being included as part of the annexes to the Colombian pleadings before the International

Court of Justice, pursuant to the provisions of Decree 1557 of 14 July 1989 in accordance with the General Code of the Proceedings and complementary provisions .-**FIFTH:**-My name is as stated above, Artimas Alcides Britton Davis, I am eighty-eight (88) years old, I was born in Providencia Island and I reside in the Bottom House sector, profession or occupation fisherman and farmer, civil status married, bearer of National ID number 991 .821 issued in Providencia Island . -**SIXTH:-** As stated, I declare under oath that: As artisanal fisherman I have navigated sailing boats and I am considered one of the best fishermen in the recent history of Providencia . I started fishing with nylon from the coast of Manchineel Beach and we used to sell fish to people all over the island . Back then we did not sell per pound but per batch or quantity . Afterwards I started doing fishing trips to Roncador and the Northern Cays since I was 15 years old. There was a large boat called "Zinú River" in the beginning of the sixties (60s) that would arrive to Providencia and take us to Roncador . Some other times we went there aboard a sailing boat named "Wave Crest". They would leave us there with our canoes and catboats (small sailing boat) . Back then we fished with nylon and then they would pick us up 15 days later .I remember the first time we went, we could not take the boats ashore due to the amount of queen conch we could find at the seashore, it was abundant . Today it is scarce and you have to dive to find it . On another occasion, one night all of a sudden we saw many lights coming from under the sea to the seashore: those were lobsters that were coming to take shelter in the calmed waters at seashore . There were so many . Back then

we were not used to catching lobster. We did not eat them. We only caught fish and turtle and picked up birds' eggs. Sometimes we fished queen conch. We salted turtle meat. We also salted the eggs we found inside the turtle. We would bring all of that back to Providencia to eat. We salted bird's meat as well, especially the meat from "bubi bird" (Gannet) to bring back to Providencia. We built huts with coconut palm leaves and we built our beds and made them bulkier with plantain leaves . There in the Cay we ate fish and fresh turtle. We also boiled queen conch and "Whelks" (small conch) to eat them . In Roncador "Whelks" were abundant and very big .Sometimes we would put the "whelks" by the heat to allow the meat to come off the shell and we ate it just like that. With birds' eggs we prepared a "puoch". A mix made of battered birds' eggs and wheat flour that we would cook over the heat until it became a sort of cake. We brought our own water, but in Roncador you could save rain water in case we ran out of it .There was a water well, but we did not use it because we brought our own water but in case it was necessary we could have drunk it without a problem because it is fresh water. We also brought other supplies such as salt for salting the meats .Back then we liked to go to the cays during May and June because birds laid more eggs then and you can find more turtles . In Providencia fishermen would alternate between farming and fishing activities, so during the months we were not going to the cays we stayed in the island working on our crops. When we went to the cays, women would stay in Providencia taking care of the crops .It would be perfectly possible for someone to live in the

cays because they are capable of human habitation . I consider that a lot of people have stayed for long periods in those cays because we have seen many graves there on the sand .If I had to choose one cay to live in I would choose Roncador because is the cay I know better and it is very easy to get products . One takes food from Providencia Islands to the Northern Cays to eat that with fresh meat from sea products, but if our supplies did not last enough we could survive eating only fish and turtle meat . Once, around 50 years ago, when I used to go to Roncador, we arrived and found some other fishermen . Those cays belong to the Raizales from San Andrés, Providencia and Santa Catalina . That is the place where my grandfather used to fish and then myself, since it was him who taught me how to fish . My grandfather was an extraordinary turtle hunter and would always tell me stories about how, when he was young, he would go with his friends to Roncador to look for turtles to get their meat and shells . Those cays are important for all the inhabitants of the islands because we get our food from there and we also get resources to be able to survive, because we sell what we fish there .Back in our days, when we came back from our fishing expeditions, we not only sold the fish but also gave it away . So, everybody would eat from what we brought from there, whether they had enough to pay for it or not . In this manner the whole community lived from what we fishermen caught in the Northern Cays . The Northern cays are important for the fishes, the lobsters and the turtles .They look for the reefs nearby the cays to protect themselves at night and eat during the day .They breed there .In the case of the turtle, it goes ashore to

spawn .Those cays are important for everybody, both for fishes and for us . For the record, it is issued in Providencia Island, on the twenty-first (21) day of July of the year two-thousand seventeen (2017) . Dues $12 .200 .oo Resolution 0451 of 2017 .

[*Signed*]
AFFIANT:
ARTIMAS ALCIDES BRITTON DAVIS
C .C.[*Colombian National ID Card*] N° 991 .821of Providencia Island

[*Signed*]
[*Stamped and initialled*]
THE SINGLE NOTARY PUBLIC OF THE CIRCUIT
MARIO RAFAEL MIRANDA MORALES

[*Signed*]

THE WRIT ENDS HERE

[*Document bears stamp reading:*
That the biometric system mandated by law was not used and therefore there was no fingerprint digitalization for this act, due to the following reasons:
(...)
6. Other: Domicile.
Article 3. Resolution [illegible] of 2015]

Annex 37

AFFIDAVIT BY MR. JULIO EUSEBIO ROBINSON HAWKINS, 21 JULY 2017

(Archives of the Colombian Ministry of Foreign Affairs)

REPUBLIC OF COLOMBIA
SINGLE NOTARY PUBLIC OF THE NOTARY CIRTUIT
OF PROVIDENCIA ISLAND
ARCHIPELAGO DEPARTAMENT OF SAN ANDRÉS,
PROVIDENCIA AND SANTA CATALINA - COLOMBIA

RECEPTION OF AFFIDAVIT

SINGLE NOTARY PUBLIC OF THE PROVIDENCIA ISLAND NOTARY CIRCUIT: In the Island of Providencia, municipality of the Archipelago Department of San Andrés, Providencia and Santa Catalina, Republic of Colombia, on the twenty-first (21) day of JULY of the year two thousand and seventeen (2017), before me, **MARIO RAFAEL MIRANDA MORALES,** Single Notary Public of the Providencia Island Notary Circuit, **JULIO EUSEBIO ROBINSON HAWKINS** appeared, identified as stated below his signature, in order to render an affidavit and stated: -**FIRST:**-That all the statements set out in this instrument are rendered under oath and aware of the legal implications entailed by lying under oath -**SECOND:**-That he has no impediment whatsoever to render this affidavit, which he provides under his sole and full responsibility -**THIRD:**-That the statements rendered herein, given freely and voluntarily, relate to facts that he attests to by having witnessed them first-hand -**FOURTH:**-That this affidavit was rendered to be submitted and delivered to the Ministry of Foreign Affairs of Colombia with the purpose of its being included as part of the annexes to the Colombian pleadings before the International

Court of Justice, pursuant to the provisions of Decree 1557 of 14 July 1989 in accordance with the General Code of the Proceedings and complementary provisions .-**FIFTH**:-My name is as stated above, JULIO EUSEBIO ROBINSON HAWKINS, I am fifty-eight (58) years old, I have lived in Providencia Island for fifty-eight (58) years and I reside in the following sector: Botton House, profession or occupation fisherman, civil status married, bearer of National ID number 15 .242 .652 issued in San Andrés Island . ====-**SIXTH:**====== As stated, I declare under oath that: I am artisanal fisherman and owner of the fishing boat "Under Pressure". I fish since I was 15 years old, when I used to go fishing with older fishermen from those days, such as Sony Rankin from the sector of Free Town. When I started fishing with the older fishermen they would take me to the "Light House", nine (9) miles from here. It is the place called "Point–a–Reef" . Little by little they took me further offshore, to the East Bank, about 12 miles from Providencia . I have fished in the Northern cays . The first time I did so I went to Serrana, that was in the 70s, more or less in 1975, with a local captain called Lucho, the husband of Ethel Robinson .Back then there was a lot of fish produce in the cays. We only went to Serrana . There you can find "Triangle", "Anchor Cay" and "North Cay". Every time we went to Serrana to fish we stayed in the cay for 15 days fishing in the fishing banks located nearby . Later, when I was already an adult, I was the captain of a fishing boat called "Blue Fin" along another artisanal fisherman, Mr. Juan Howard, with whom we would go to every northern cay and fishing bank: Serrana, Serranilla, Roncador, Quitasueño .

Every time I go fishing in those cays we stay for about 8, 10 or 15 days . I discovered the fishing bank that is named after me, “Julio Bank”. That happened one day when I was on my way back to San Andrés and the fish locator started sending signals . We started fishing and noticed it was a very productive fishing bank . I placed a mark on the map to share it with other fishermen from the island and they started calling it “Julio Bank”. When we go fishing to the cays we sleep there, in huts we build to sleep. We carry drinking water from Providencia in the boats but in Roncador and Serrana Cays there are water wells. When we run out of water supplies we can drink it .Lately I fish mostly in Serrana . The last time I went to Roncador was about 8 years ago .During that year for every fishing expedition we would stay between 15 to 20 days in Roncador .During that year I went there every month, so we can say I was 12 times in Roncador that year .It is possible to live in the cays .If I decide to go and live in one cay I would choose Roncador, my favourite cay, because the fishing bank is close and it is very productive, full of fish .You can catch queen conch nearby the cay .You will not starve . You bring your nylon to fish and you can find fish right there at the seashore .Besides, the island has many coconut palm trees full of coconuts . You can live in Serrana . You could also live in Seranilla because you have coconut there . In all those cays you can also collect rain water . Those cays are important for me economically, because we can go and stay there and get our products and come back to sell them . In the cays you find fish, queen conch, “whelks” (small conch), lobster, etc . From those cays I obtain economic sustenance for

me and my family . I have my boat ready to go and fish in the cays right now . The cays are also important to take shelter and rest . Cays are also important for the fish, because the reef provides them with food. We identified this special food we see the fish eat. We call it "mango" because it is yellow and looks like a mango's pulp and it grows in large quantities nearby the cays in the bottom of the sea . That is why fish abound nearby the cays and that is good for those of us who live from fishing . Even if fishermen from other countries fish in the cays, those cays belong to the fishermen from Providencia and San Andrés . You eat very well in the cays . You eat fish and, when it was possible, turtle . You always have a good cook, like Mr . Sauce and Mr . Spike, who cook very well . For breakfast we eat bread and fried fish . For the record, it is issued in Providencia Island, on the twenty-first (21) day of July of the year two-thousand seventeen (2017) . Dues $12 .200 .oo Resolution 0451 of 2017 .

[*Signed*]
AFFIANT:
JULIO EUSEBIO ROBINSON HAWKINS
C .C. [*Colombian National ID Card*] N° 15 .242 .652 of San Andrés Island .

[*Signed*]
[*Stamped and initialled*]
THE SINGLE NOTARY PUBLIC OF THE CIRCUIT
MARIO RAFAEL MIRANDA MORALES

[*Signed*]

THE WRIT ENDS HERE

BIOMETRIC AUTHENTICATION FOR EXTRA-PROCEDURAL DECLARATION

In the city of Providencia, Department of San Andrés, Republic of Colombia, on the twenty-first (21) day of July of two-thousand seventeen (2017), in the Single Notary Public of the Notary Circuit of Providencia, appeared: JULIO EUSEBIO ROBINSON HAWKINS bearing National ID / NUIP #0015242652 .

[*Signed*]
Autographic signature

[*Barcode*]
266zc3ou8eo4
21/07/2017 -10:45:00:565

Pursuant to Article 18 of Decree-Law 019 of 2012, the affiant was identified by biometric authentication, through the comparison of his fingerprint against the biographical and biometric information of the database of the National Civil Status Registry .
In accordance with the authorisation provided by the user, it will receive the legal treatment related to personal data protection and information security policies established by the National Civil Status Registry .
These minutes are part of the extra-procedural declaration FISHING DECLARATION IN THE NORTHERN CAYS, rendered by the affiant destined to MINISTRY OF FOREIGN AFFAIRS OF COLOMBIA .

[*Digital signature and stamp*] [*Stamped and initialled*]
MARIO RAFAEL MIRANDA MORALES
Single Notary Public of the Circuit of Providencia

The present document can be found in the following website
www.notariasegura.com.co
Single transaction number: 266zc3ou8eo4

Annex 38

AFFIDAVIT BY MR. ANSELMO DAWKINS DUFFIS, 11 AUGUST 2017

(Archives of the Colombian Ministry of Foreign Affairs)

SINGLE NOTARY PUBLIC OF THE NOTARY CIRCUIT OF SAN ANDRES ISLAND
ARCHIPIÉLAGO OF SAN ANDRÉS, PROVIDENCIA AND SANTA CATALINA==========
ADDRESS: AVENIDA FRANCISCO NEWBALL-CENTRO COMERCIAL DANN LOCALES 133- 134- PHONE NUMBER – 5126119- TELEFAX- 5122112- SAN ANDRES-ISLAND-COLOMBIA==========

RECEPTION OF AFFIDAVIT

In the city of San Andrés, Island, provincial capital of the Archipelago Department of San Andrés, Providencia and Santa Catalina, Republic of Colombia, on the ELEVENTH (11) day of **AUGUST** of the year two-thousand seventeen (2017), before the Single Notary Public of the San Andrés Island Notary Circuit, the functions of which are discharged by **FERDINO BERNARD FORBES, ANSELMO DAWKINS DUFFIS,** identified with national identification card number **991.290** issued in San Andrés, appeared in order to render an affidavit and stated:-**FIRST:**-That all the statements set out in this instrument are rendered under oath and aware of the implications of lying under oath -**SECOND**:-That he has no impediment to render this affidavit, which he provides under his sole and full civil, criminal or disciplinary liability -**THIRD:**-That the statements rendered herein are given freely and voluntarily, and that I have personal knowledge thereof and can attest to them by having witnessed them first-hand -**FOURTH:**-

That this affidavit was rendered to be submitted and delivered to the Ministry of Foreign Affairs of Colombia with the purpose of its being included as part of the annexes to the Colombian pleadings before the International Court of Justice, pursuant to the provisions of Decree 1557 of 14 July 1989 in accordance with the General Code of the Proceedings and complementary provisions . -**FIFTH:- GENERAL LEGAL IDENTIFYING INFORMATION**- My name is **ANSELMO DAWKINS DUFFIS**, I am ninety-one (91) years old, I was born in San Andrés Island and I live in the following address: Cove Sector, profession or occupation fisherman, civil status widower . -**SIXTH**:- As stated, I declare under oath that my name is Anselmo Dawkins Duffis, I have worked as an artisanal fisherman for 15 or 20 years. When wo go on fishing expeditions we usually go to Roncador, Serrana and Quitasueño . We fish is Milford Mckeller Hudgson, I have worked as an artisanal fisherman for the last 79 years .I fish since I was 12 years old. When I went fishing I used to go to the Southern cays, that is Bolívar (East-South-East) and Albuquerque (South-South-West) and the northern cays of Roncador and Serrana. We went to Roncador and Serrana in a sailing boat named "STANTON" about 35 feet long. It had a mast. We sailed. If the wind came from the south, we would navigate directly northwards .If it came from the north, we would navigate in an East-West direction, East-West until we arrived to Roncador or Serrana. This expedition would last 3 days. We left from San Andrés island, from the "Little Gaff" sector. I went with Mr. Maxwell Corpus .In Roncador and Serrana we would stay 15 to

20 days . The longest I have stayed there was 22 days . There were huts there, in both cays, built by us, artisanal fishermen . We used coconut tree leaves that we found there. Those coconut trees were planted by ancient fishermen .One of those fishermen was my grandfather Clemance Duffis, who used to go there bringing coconut tree seeds from here to grow in Roncador and Serrana. When we sailed to the northern cays, Mr. Maxwell was the captain and I was the helmsman . In Roncador and Serrana we ate fish, turtle, turtle's eggs and bird's eggs. We brought flour, plantain, yucca, *mafafa* (a tubercle), sweet potato and rice from San Andrés. We used the coconut available there to cook coconut rice or *rundon* (typical dish made with coconut milk) . We also prepared lavender tea. Sometimes we drank it with coconut milk and it turned into a sort of chocolate. When we went to Roncador and Serrana we principally picked up birds' eggs. We also fished and hunted turtles to salt their meat and went back to San Andrés with birds' eggs and salted fish and turtle meat. The birds' eggs were fancied a lot in San Andrés. We sold what we brought and we also gave away a lot of food among the people. We made a lot of money back then. This is the 50s I am talking about . Each fisherman would earn around 50 cents per trip to the northern cays . That was a lot of money . A bag of cement would cost around 3 cents . Back then one could build a house with the produce of the activities in Roncador and Serrana . To go to Roncador and Serrana we went sailing . I think one could grow crops in Roncador and Serrana . The soil in those cays is very good, is sand mixed with soil. We brought water from San Andrés to drink, but if it finished we

could use the water in the wells located there. When it rained we also collected water . I believe a person could live both in Roncador and in Serrana. We stayed there for 20 days. That is a lot .If you can stay there for 20 days, you can stay as long as you want . The sea has a very special meaning, both religious and spiritual, for the Raizales .I was baptised in the sea by the Cove and Lynval Baptist Church, in San Andrés .That day, a Sunday, 27 people were baptised .I was fifty years old .One of my sons almost got onboard the "Betty B" boat that sank between San Andrés and Providencia .At the last minute he decided not to get on board .Otherwise, he would have died there when that boat sank. The spirits of those people who died in the "Betty B" are there, in the sea, because the bible says that when Jesus returns, all of those who are in the sea that belong to God will come out first .Those spirits in the sea communicate with us .I know of someone who had a dream on which a girl that died tragically in the sea told him that every time they go to the southern cays they pass over her .The people who have died in the sea are down there .They have to be there, because the bible says so . This is our sea, the Raizal's sea. It is important for us. Our food is there and our death people is there .

The Affiant displayed sound mind, expressed himself clearly and signs the present declaration writ with the undersigned Notary Public, once read and approved, his right index fingerprint was set .

NOTES ._____

[*Signed*]

The Affiant: **ANSELMO DAWKINS DUFFIS**

CC .[*Colombian National ID Card No.*] 991 .290

[*Signed*]

The Notary Public

FERDINO BERNARD FORBES

ERTSW.

[*Signature and stamp*]

THE WRIT ENDS HERE

[*Document bears stamp reading:*
That the biometric system mandated by law was not used and therefore there was no fingerprint digitalization for this act, due to the following reasons:
(...)
4. Lack of connectivity.
Article 3. Resolution 6457 of 2015 S.N.]

Annex 39

AFFIDAVIT BY MR. BELTRAN JUVENCIO FERNANDEZ HOY, 21 JULY 2017

(Archives of the Colombian Ministry of Foreign Affairs)

REPUBLIC OF COLOMBIA
SINGLE NOTARY PUBLIC OF THE NOTARY CIRCUIT OF PROVIDENCIA ISLAND
ARCHIPELAGO DEPARTAMENT OF SAN ANDRÉS, PROVIDENCIA AND SANTA CATALINA - COLOMBIA

RECEPTION OF AFFIDAVIT

SINGLE NOTARY PUBLIC OF THE PROVIDENCIA ISLAND NOTARY CIRCUIT: In the Island of Providencia, municipality of the Archipelago Department of San Andrés, Providencia and Santa Catalina, Republic of Colombia, on the twenty-first (21) day of JULY of the year two thousand and seventeen (2017), before me, **MARIO RAFAEL MIRANDA MORALES,** Single Notary Public of the Providencia Island Notary Circuit, **BELTRAN JUVENCIO FERNANDEZ HOY** appeared, identified as stated below his signature, in order to render an affidavit and stated: -**FIRST:**-That all the statements set out in this instrument are rendered under oath and aware of the legal implications entailed by lying under oath -**SECOND:**-That he has no impediment whatsoever to render this affidavit, which he provides under his sole and full responsibility -**THIRD:**-That the statements rendered herein, given freely and voluntarily, relate to facts that he attests to by having witnessed them first-hand -**FOURTH:**-That this affidavit was rendered to be submitted and delivered to the Ministry of Foreign Affairs of Colombia with the purpose of its being included as part of the annexes to the Colombian pleadings before the International

Court of Justice, pursuant to the provisions of Decree 1557 of 14 July 1989 in accordance with the General Code of the Proceedings and complementary provisions .- **FIFTH:**-My name is as stated above, Beltran Fernandez Hoy, I am seventy-one (71) years old, I was born on 10 April 1946 in Providencia Island, and since then I have lived here in the island in the Rocky Point sector, profession or occupation fisherman, civil status widower, bearer of National ID number 4 034 .575 issued in Providencia Island .- **SIXTH:-** As stated, I declare under oath that: My mother's name was Lortley Hoy from the neighbouring island of Santa Catalina and my father was Beltran Fernández .I am seventy-one (71) years old and my main job is to fish through diving to lung . I have fished for 30 years in the Northern Cays: Serrana, Serranilla and Roncador, where we would stay for 15 days fishing .My first trip to the Northern cays was with Mr . BOB MARKS with the purpose of looking for gold. We went to Serrana on a boat called LADY ALIS, back then I was only 16 years old . I was the first person in Providencia Island to fish lobster by diving, when an American citizen called FRANK REED started a business for lobster processing and he would buy the products, paying one (1) peso per pound .In order to go to the Northern cays we had to check the weather. We used to do approximately six trips to the cays per year . I have fished in the cays for more than 30 years . I dived to lung for 20 years .I know fishermen from San Andrés that went to the Northern cays, as well as fishermen from Providencia, and the catch obtained from fishing as well as the products caught by fishermen from Providencia would be sold in

San Andrés .It is clear that people can live in the Cays .You can build shelters or lodging because the Cays are big enough . I would live in Seranilla because it is more comfortable to live in, it has coconut trees, it has water .Sometimes we would find 20 or more fishermen from Providencia in the cays, fishing simultaneously, and we would also find people with different nationalities, especially Jamaicans, fishing and diving alike . Jamaicans spent days in the cays, just like us . Tosleep in the cay we would bring mats and built shelters. With regard to food, we brought cookies, flour, coffee, chocolate, supplies, as well as firewood and for the protein we would eat sea products that we fished in the cays (conch, turtle, lobster and fish). We brought enough water from Providencia for the fishing expeditions in the Northern Cays .If necessary or if we used up all the water we brought, we could use the water from a well that was in the cay . I do not know of anyone getting sick for drinking water from that well. We used the water from the well to cook and the water we brought from Providencia to drink . I did several trips to Jamaica from the cays. We brought turtle shell to sell and we went back to the cays to fish and then go back to Providencia . Everybody wanted to go to the cays because there is where the money is .I used to fish with a mister Martinez from Nicaragua who owned a fishing boat. We used to go to the cays to fish with him, we went back to San Andrés and picked up coffee, cigarettes and other things and brought those things to Nicaragua (Little Corn Island and Big Corn Island) to be sold in Bluff and Bluefields; that was in the 60s . The fishing expeditions were done in canoes which were carried there on

larger boats that would then deploy them on the water once we arrived to the cays and we used them to fish in the area and in the different surrounding banks (Anchor Key, North Key). Every time we went to the cays we found fishermen from other countries, such as Jamaicans and Hondurans. They would constantly go the cays. For the record, it is issued in Providencia Island, on the twenty-first (21) day of July of the year two-thousand seventeen (2017). Dues $12.200.oo. Resolution 0451 of 2017.

[*Signed*]
AFFIANT:
BELTRAN JUVENCIO FERNANDEZ HOY
C.C. [*Colombian National ID Card*] N° 4.034.575 of Providencia Island

[*Signed*]
[*Stamped and initialled*]
THE SINGLE NOTARY PUBLIC OF THE CIRCUIT
MARIO RAFAEL MIRANDA MORALES

[*Signed*]

THE WRIT ENDS HERE

BIOMETRIC AUTHENTICATION FOR EXTRA-PROCEDURAL DECLARATION

In the city of Providencia, Department of San Andrés, Republic of Colombia, on the twenty-first (21) day of July of two-thousand seventeen (2017), in the Single Notary Public of the Notary Circuit of Providencia, appeared: BELTRAN JUVENCIO FERNANDEZ HOY bearing National ID / NUIP #0004034575 .

[*Signed*]
Autographic signature

[*Barcode*]
1z1xqknukhh9
21/07/2017 -15:28:23:398

Pursuant to Article 18 of Decree-Law 019 of 2012, the affiant was identified by biometric authentication, through the comparison of his fingerprint against the biographical and biometric information of the database of the National Civil Status Registry .
In accordance with the authorisation provided by the user, it will receive the legal treatment related to personal data protection and information security policies established by the National Civil Status Registry .
These minutes are part of the extra-procedural declaration FISHING DECLARATION IN THE NORTHERN CAYS, rendered by the affiant destined to MINISTRY OF FOREIGN AFFAIRS OF COLOMBIA .

[*Digital signature and stamp*] [*Stamped and initialled*]
MARIO RAFAEL MIRANDA MORALES
Single Notary Public of the Circuit of Providencia

The present document can be found in the following website
www.notariasegura.com.co
Single transaction number: 1z1xqknukhh9

Annex 40

AFFIDAVIT BY MR. WILLBERSON FERNANDO ARCHBOLD ROBINSON, 21 JULY 2017

(Archives of the Colombian Ministry of Foreign Affairs)

REPUBLIC OF COLOMBIA
SINGLE NOTARY PUBLIC OF THE NOTARY CIRTUIT
OF PROVIDENCIA ISLAND
ARCHIPELAGO DEPARTAMENT OF SAN ANDRÉS,
PROVIDENCIA AND SANTA CATALINA - COLOMBIA

RECEPTION OF AFFIDAVIT

SINGLE NOTARY PUBLIC OF THE PROVIDENCIA ISLAND NOTARY CIRCUIT: In the Island of Providencia, municipality of the Archipelago Department of San Andrés, Providencia and Santa Catalina, Republic of Colombia, on the twenty-first (21) day of JULY of the year two thousand and seventeen (2017), before me, **MARIO RAFAEL MIRANDA MORALES,** Single Notary Public of the Providencia Island Notary Circuit, **WILLBERSON FERNANDO ARCHBOLD ROBINSON** appeared, identified as stated below his signature, in order to render an affidavit and stated: ===**FIRST:**=== -That all the statements set out in this instrument are rendered under oath and aware of the legal implications entailed by lying under oath . === **SECOND:** === That he has no impediment whatsoever to render this affidavit, which he provides under his sole and full responsibility . ===**THIRD:** === That the statements rendered herein, given freely and voluntarily, relate to facts that he attests to by having witnessed them first-hand . === **FOURTH:** ===That this affidavit was rendered to be submitted and delivered to the Ministry of Foreign Affairs of Colombia with the purpose of its being included as part of the

annexes to the Colombian pleadings before the International Court of Justice, pursuant to the provisions of Decree 1557 of 14 July 1989 in accordance with the General Code of the Proceedings and complementary provisions . === **FIFTH:**=== My name is as stated above, Willberson Archbold, I am seventy-nine (79) years old, I have lived in Providencia Island for seventy-nine (79) years and I reside in the Free Town sector, profession or occupation fisherman and traditional musician, civil status cohabitation, bearer of National ID number 991 .912 issued in Providencia Island . ===**SIXTH**: === As stated, I declare under oath that I was born on 17 October 1937 in Providencia Island and I will be 80 years old in October .I grew up in Providencia Island, for some years my mother left me here with my grandmother and we know grandmothers are just like mothers .I had to learn to do a little bit of everything, since I was very young my grandmother taught me to take care of the livestock, to fish, to use a machete, to do a bit of everything . I started to fish when I was 17 or 19 years old, since my mom left me under the care of my grandmother in Providencia Island when I was very young . I would combine music and fishing . I fished for many years in the Northern cays, especially in Serrana and Roncador and I was about 20 years old when I decided to go there for the first time . To get to Serrana or Roncador we fishermen were carried there in boats with our smaller boats made in the Island, canoes and catboats (sailing boats) . Those larger boats would pick the fishermen and all our equipment up in Providencia Island, and then drop us in Serrana or Roncador . Sometimes we would stay one or two months living in the cays,

particularly in Roncador . At times we would arrive and find people there already and we would relax there with them. We came and went, regularly during the year, even people from San Andrés . In general, Roncador and Serrana were never alone, there was always people there fishing, from the Archipelago or from other countries . Sometimes, we would arrive and find people already there so we relaxed with them .People from San Andrés went to Serrana to salt their fishes. We basically used to salt our fishes, pick up birds' eggs and flip turtles; we waited for the boat to pick us up and return us to port in Providencia Island and they would sell the catch in Cartagena. We used to stay in Roncador. We liked it a lot because we fished during the day, went back, took a rest, ate, if you saw turtles you tried to catch them, went back and we waited until it was late at night again to see if they would spawn, and we used to salt the fish all the time until the bags were completely full, without exceeding the maximum weight because then the boat would not be able to take us back . In Roncador around 6 people would stay at the same time, that is three fishing couples or partners. We were fishing partners, we went together, two per boat . Each couple would do everything together, go to work together, fish, salt, cook, sleep next to each other, everything together . Alarger boat would go with 2, 3 or 4 catboats and drop them there. What people from other places do is that, since they want to buy fresh fish, they plan a fishing operation to get fresh fish, so the larger boats would carry smaller catboats, tie them up to lower them down and then fish the next day, those boats have fridges so when they came back they would weigh the catch and sell it, but

we, the fishermen from San Andrés and Providencia, didn't do that, we would stay in the island, we would dry them and put them in bags. We used larger boats like a barge. We put together 5, 6, 7, 8 catboats and those would go and fish . Many fishing boats would do that. Fresh fish every day. We wrote down how much each of us caught, 200 pounds of snapper, 200 pounds of another thing, and they would pay you right there .At that time it was only fishing during those days . No diving at all . Only fishing with twine .Lobster and those things would no catch our attention .Only fish .There was this one time when the boat that was carrying us was overloaded so in order not to leave our boat (catboat) behind my partner said we could navigate from Roncador to Providencia Island, it was raining and there was a lot of wind . It was a very difficult journey, but thank god we lived to tell the story . Our stay in the Northern cays was a natural experience, we would make our own sleeping arrangements or build huts to cover ourselves or protect from the adverse climate. When we arrived we picked up sticks and leaves, with rocks and cloth we did the bed. We also brought enough supplies in order to survive without problems, we cooked outdoors, we used the coconut trees and benefited from them and we tried to make our stay there a comfortable and productive one. We had to bring tanks with water and it was scarce . No water well existed back then . That was during the fifties .To cook we would pick up three or four rocks, we started the firewood and we placed the pot. We could live in those islands, as long as it was necessary, while you had enough (fresh) water, and if you dug you could find water, and you

could also fetch the water that slid from palm trees when it rained . During the night we would play cards and dominoes with the colleagues. We also told Anancy stories. One could perhaps grow crops in Serrana . Birds went there to spawn, but since soldiers arrived there with their dogs birds won't come anymore. I cannot tell you how many thousands of eggs we used to collect . We also had the coconut trees, but since the soldiers arrived we cannot go there anymore. We visited Serrana more frequently but if I were to stay anywhere I would choose Roncador because turtles mostly go there. We would go there in July and we stayed for a month to flip turtles around and we came back with enough catch to sell but that is not so frequent now because the government makes it very difficult, the coastguards place a lot of restrictions, it is very hard to get the requested permits. We did not have to do any of that before, you just went there and that was it .Fishing in Serrana and Roncador will always be very important for us because it guarantees an income alternative for our families, but it is worth mentioning that it is a difficult job and not everyone manages to reach the category of fisherman in the cays . Fishing in the northern cays should not end . It is something natural that our ancestors did . Those memories bring back our culture, our traditions, like salty turtle, salty albatross, birds' eggs. Even lavender to make tea . I would not like to see our islands taken away .Each island has its own reef, all those fishes live there, they arrive at night and take refuge there and sleep there, so do the turtles, which after spending all day in the ocean go there at night and take refuge, that reef is their home, they get protection from it . The next

morning you find the turtles leaving to the ocean again. When they finish eating, you see them going back to the reef . It looks like they are far but they are always close to their home . It is important for them . I do not fish in the northern cays now because of health concerns, but I believe that our relation to those islands will always be an ancestral connection, therefore it is important that young people get to know and understand the influence that fishing in Roncador, Serrana and the other northern cays has in our culture . One can live in those cays because I had the experience of being there and living there many days . For the record, it is issued in Providencia Island, on the twenty-first (21) day of July of the year two-thousand seventeen (2017) . Dues $12 .200 .oo.Resolution 0451 of 2017 .

[Signed]
AFFIANT:
WILLBERSON FERNANDO ARCHBOLD ROBINSON
C .C.[*Colombian National ID Card*] N° 991 .912of Providencia Island

[*Signed*]
[*Stamped and initialled*]
THE SINGLE NOTARY PUBLIC OF THE CIRCUIT
MARIO RAFAEL MIRANDA MORALES

[*Signed*]

THE WRIT ENDS HERE

BIOMETRIC AUTHENTICATION FOR EXTRA-PROCEDURAL DECLARATION

In the city of Providencia, Department of San Andrés, Republic of Colombia, on the twenty-first (21) day of July of two-thousand seventeen (2017), in the Single Notary Public of the Notary Circuit of Providencia, appeared: WILBERSON FERNANDO ARCHBOLD ROBINSON, bearing National ID / NUIP #0000991912 .

[*Signed*]
----Autographic signature----

[*Barcode*]
5hm5hq7r3st
21/07/2017 -10:47:33:895

Pursuant to Article 18 of Decree-Law 019 of 2012, the affiant was identified by biometric authentication, through the comparison of his fingerprint against the biographical and biometric information of the database of the National Civil Status Registry .
In accordance with the authorisation provided by the user, it will receive the legal treatment related to personal data protection and information security policies established by the National Civil Status Registry .
These minutes are part of the extra-procedural declaration FISHING DECLARATION IN THE NORTHERN CAYS, rendered by the affiant destined to MINISTRY OF FOREIGN AFFAIRS OF COLOMBIA .

[*Digital signature and stamp*] [*Stamped and initialled*]
MARIO RAFAEL MIRANDA MORALES
Single Notary Public of the Circuit of Providencia

The present document can be found in the following website
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Single transaction number: 5hm5hq7r3st

Annex 41

AFFIDAVIT BY MR. CARSON ANTONIO BROWN ARCHBOLD, 21 JULY 2017

(Archives of the Colombian Ministry of Foreign Affairs)

REPUBLIC OF COLOMBIA
SINGLE NOTARY PUBLIC OF THE NOTARY CIRTUIT
OF PROVIDENCIA ISLAND
ARCHIPELAGO DEPARTAMENT OF SAN ANDRÉS,
PROVIDENCIA AND SANTA CATALINA - COLOMBIA

RECEPTION OF AFFIDAVIT

SINGLE NOTARY PUBLIC OF THE PROVIDENCIA ISLAND NOTARY CIRCUIT : In the Island of Providencia, municipality of the Archipelago Department of San Andrés, Providencia and Santa Catalina, Republic of Colombia, on the twenty-first (21) day of July of the year two thousand and seventeen (2017), before me, **MARIO RAFAEL MIRANDA MORALES,** Single Notary Public of the Providencia Island Notary Circuit, **CARSON ANTONIO BROWN ARCHBOLD** appeared, identified as stated below his signature, in order to render an affidavit and stated: -**FIRST:**-That all the statements set out in this instrument are rendered under oath and aware of the legal implications entailed by lying under oath -**SECOND:**-That he has no impediment whatsoever to render this affidavit, which he provides under his sole and full responsibility -**THIRD:**-That the statements rendered herein, given freely and voluntarily, relate to facts that he attests to by having witnessed them first-hand -**FOURTH:**-That this affidavit was rendered to be submitted and delivered to the MINISTRY OF FOREIGN AFFAIRS OF COLOMBIA

with the purpose of its being included as part of the annexes to the Colombian pleadings before the International Court of Justice, pursuant to the provisions of Decree 1557 of 14 July 1989 in accordance with the General Code of the Proceedings and complementary provisions .-**FIFTH:**- My name is as stated above, Carson Brown, I am sixty-two (62) years old, I have lived in Providencia Island for the same amount of years, and I reside in the following sector: Santa Catalina, profession or occupation Fisherman and Farmer, civil status married, bearer of National ID number 8 .687 .148issued in Providencia Island . - **SIXTH**: - As stated, I declare under oath that: I was born 62 years ago in the Boxton Sector in Providencia Island but I grew up and have lived in Santa Catalina Island for all of my life . In order to provide for my family, composed of my wife, five daughters and six grandchildren, I have worked as farmer and fisherman .I have been a fisherman since I was 15 years old and I learned about this occupation from traditional fisherman such as Mr. Sterlin, Manuel Bush, Willie Bush, Ricardo Steele and my father, Joe . During my entire life I have practiced diving and fishing with nylon, continuing a tradition started by my father . I started fishing in the Northern Cays since I was about 15 years old. We went to Serrana and to Roncador . Back then there was a large boat called “Nanizeta”, whose captain was Ibsan Howard, and it would carry with it several sailing boats to fish . Usually each boat would carry six catboats (sailing boats) and each catboat had two or three crewmembers .They would take us

and leave us there and then they would come back to pick us up. We used paddles and sails to move around the cay, and we slept in the fishing area. We would generally stay there for about 15 to 20 days and we regularly went, depending on the weather, around ten times per year . On one occasion we had to stay there for more a month because the boat that had to pick us up did not come back on time due to bad weather conditions (Northern winds) .Because of the amount of time we had to remain there, the food we had brought was finished so we ate lobster and boiled conch . We would regularly go and look for fish and turtles. In the beginning we would salt the fish because it was the only way to keep it fresh but afterwards we starting keeping it in ice. We would also bring back many birds' eggs, which were consumed in the island. We would usually give the eggs to our family and friends who were anxiously awaiting our return. When we went to Serrana we opted to spend the night in North Cay or Anchor Cay .To sleep we used a hut, sticks, and palms for the ceiling . Each group of fishermen, that is, per each catboat, would bring as much food as necessary to stay in the cays, including Journey Cake, Sweet Cake, Soda Cake and supplies such as yucca and yam. We would also use the lavender that grows in the cays to make tea. We brought the water from Providencia, although there is a water well in Serrana which is normally used to take baths but could be used to drink, but after boiling it up a bit . During each trip there was a cook and each group of fishermen would bring a fish to prepare

lunch .Fishing in the Northern cays has been carried out by the islanders since ancestral times, since 1800 at least .Back then many fishermen from Jamaica and the Cayman Islands would go there too . Jamaican fishermen were mostly interested in catching crab .For example, my father-in-law, Mr . Osuero Archbold, told me that they used to go to the cays in sailing boats and the trip could last about four days, looking for turtles and salty fish . They would guide themselves following the sextant and the stars .I think it is possible to live in the Cays and if I had to choose I would live in Anchor Cay in Serrana, since it is safe because the reef is very close . Although I could live in Roncador too . For the record, it is issued in Providencia Island, on the twenty-first (21) day of July of the year two-thousand seventeen (2017) . Dues $12 .200 .oo .Resolution 0451 of 2017 .

[*Signed*]
AFFIANT:
CARSON ANTONIO BROWN ARCHBOLD
C .C. [*Colombian National ID Card*] N° 8 .687 .148 of Barranquilla

[*Signed*]
[*Stamped and initialled*]
THE SINGLE NOTARY PUBLIC OF THE CIRCUIT
MARIO RAFAEL MIRANDA MORALES

[*Signed*]

THE WRIT ENDS HERE

[*Document bears stamp reading:*
That the biometric system mandated by law was not used and therefore there was no fingerprint digitalization for this act, due to the following reasons:
(...)
4. Lack of connectivity
Article 3. Resolution [illegible] of 2015]

Annex 42

AFFIDAVIT BY MR. FIDELINO GOMEZ BERNARD, 21 JULY 2017

(Archives of the Colombian Ministry of Foreign Affairs)

REPUBLIC OF COLOMBIA
SINGLE NOTARY PUBLIC OF THE NOTARY CIRTUIT
OF PROVIDENCIA ISLAND
ARCHIPELAGO DEPARTAMENT OF SAN ANDRÉS,
PROVIDENCIA AND SANTA CATALINA - COLOMBIA

RECEPTION OF AFFIDAVIT

SINGLE NOTARY PUBLIC OF THE PROVIDENCIA ISLAND NOTARY CIRCUIT : In the Island of Providencia, municipality of the Archipelago Department of San Andrés, Providencia and Santa Catalina, Republic of Colombia, on the twenty-first (21) day of July of the year two thousand and seventeen (2017), before me, **MARIO RAFAEL MIRANDA MORALES**, Single Notary Public of the Providencia Island Notary Circuit, **FIDELINO GOMEZ BERNARD** appeared, identified as stated below his signature, in order to render an affidavit and stated: -**FIRST:**-That all the statements set out in this instrument are rendered under oath and aware of the legal implications entailed by lying under oath .-**SECOND:**-That he has no impediment whatsoever to render this affidavit, which he provides under his sole and full responsibility .-**THIRD:**-That the statements rendered herein, given freely and voluntarily, relate to facts that he attests to by having witnessed them first-hand .-**FOURTH:**-That this affidavit was rendered to be submitted and delivered to the Ministry of Foreign Affairs of Colombia with the purpose of its being included as part of the annexes to the Colombian pleadings before the International

Court of Justice, pursuant to the provisions of Decree 1557 of 14 July 1989 in accordance with the General Code of the Proceedings and complementary provisions .-**FIFTH:**-My name is as stated above, FIDELINO GÓMEZ BERNARD (sic), I am sixty-seven (67) years old, I have lived in Providencia Island for the same amount of years, and I reside in the following sector: Bottom House, profession or occupation fisherman, civil status single, bearer of National ID number 18 .002260 issued in Providencia Island . -**SIXTH**: - As stated, I declare under oath that: My name is Fidelino Gómez Bernard, I am 67 years old, I live in the Bottom House sector in Providencia Island and I have been a fisherman since I was 18 years old . I have a lot of experience fishing in Serrana and Roncador cays, located in the Northern cays . However, I have also fished in Serranilla and Bajo Nuevo . Back in my time we used to fish in catboats that were carried there by a larger boat, as is the case of the boats named Bolero and Wave Crest, which were also propelled by sails. We would generally go for periods of 15 or 20 days . Sometimes fishermen would carry products made of cattle skin to sell to other fishermen that go to that area .Back then we used to catch fish and turtles. We used the fresh water well to take a shower and sometimes to drink. When we went to the Cays we used to bring everything we needed to stay there comfortably, such as water, supplies, Soda Cake or Sugar Cake .In the Cays it is possible to grow crops since there are many dry leaves and fertilizer for the birds that live there .I also believe one can live in the cays. We could build houses to live in and even constructions related to fishing such as a cold room . For the

record, it is issued in Providencia Island, on the twenty-first (21) day of July of the year two-thousand seventeen (2017) . Dues $12 .200 .oo Resolution 0451 of 2017 .

[*Signed*]
AFFIANT:
FIDELINO GOMEZ BERNARD
C .C. [*Colombian National ID Card*] N° 18 .002 .260 of Providencia Island

[*Signed*]
[*Stamped and initialled*]
THE SINGLE NOTARY PUBLIC OF THE CIRCUIT
MARIO RAFAEL MIRANDA MORALES

[*Signed*]

THE WRIT ENDS HERE

[*Document bears stamp reading:*
That the biometric system mandated by law was not used and therefore there was no fingerprint digitalization for this act, due to the following reasons:
(...)
4. Lack of connectivity
Article 3. Resolution [*illegible*] *of 2015*]

Annex 43

W. T. BURKE, "CUSTOMARY LAW AS REFLECTED IN THE LOS CONVENTION: A SLIPPERY FORMULA", J. P. CRAVEN *ET AL* (EDS.), *THE INTERNATIONAL IMPLICATIONS OF EXTENDED MARITIME JURISDICTION IN THE PACIFIC*, LAW OF THE SEA INSTITUTE, WILLIAM S. RICHARDSON SCHOOL OF LAW, UNIVERSITY OF HAWAII, 1989

The International Implications of Extended Maritime Jurisdiction in the Pacific

Proceedings of the
21st Annual Conference of
The Law of the Sea Institute

co-sponsored by the

The East West Center
The Hawaii Maritime Center

General Chairmen:
John P. Craven
Norton Ginsburg
Tommy T. B. Koh

August 3–6, 1987
Honolulu, Hawaii

Edited by

John P. Craven
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Carol Stimson

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"CUSTOMARY LAW AS REFLECTED IN THE LOS CONVENTION": A SLIPPERY FORMULA

William T. Burke
University of Washington
Seattle, Washington

Over the past several years, particularly since the conclusion of the 1982 LOS treaty, the United States executive branch has been particularly active in expressing its views on the lawfulness of claims to exercise authority over the oceans. These expressions typically are expressed in two different ways: one is to exercise what are considered to be rights under international law in circumstances in which they appear to be denied and the second is to communicate directly, stating a view differing from that of the recipient government.

Considered together, and given the numbers that have been mentioned by State Department officials, the total number of expressions of view are very large, numbering apparently in the hundreds. Thus the Legal Adviser noted that since 1978 the freedom of navigation program has exercised its rights "against the objectionable claims of over 35 countries, including the Soviet Union, at a rate of about 30-40" per year. Protests against excessive claims since 1982 are reported by Assistant Secretary Negroponte to be "well over 40."

In many respects this process of communication occurs beyond the view of the academic or other observer and one cannot offer meaningful overall appraisal of the entire course of events. Observers cannot determine by their own means what these programs achieve, either by the exercise of rights or by sending protests. Apart from isolated speeches by State Department officials, there appears to be no communication of results to a wider audience, except in somewhat unusual circumstances such as the results of the interaction with Libya, which attracts a good deal of attention, or perhaps when there is a particular incident involving the Soviet Union. While we are informed that there have been a great many exercises of U.S. rights in contexts of challenge to others' objections, the effect (persuasive or coercive), if any, is apparently limited to the particular opposing state. Similarily, many protests are made but few apparently are given currency beyond the recipient.

In light of the above information about challenges and protests, one question that immediately occurs, but cannot be answered by the observer, is whether this is evidence that the law of the sea as practiced by many other states is seriously inconsistent with the view of the United States on important issues. If the Legal Adviser's statement is that there have been several hundred exercises of rights over a period of about ten years, there would seem to be a lot of states out of step with the United States. This does not necessarily follow, since many of these may be repetitive exercises involving the same state, as was the case with Libya over the past several years. My point is that the outside observer cannot determine what implications can be fairly drawn.

No doubt there are sound reasons for sometimes muting challenges and protests, because the former may be made more provocative by publicity than is intended and protests might have the potential of adversely affecting wider and more important political relations. Certainly the decision not to challenge and not to protest may be influenced, not necessarily wisely, by the wider

political context. These hazards are not unnoticed by officials. David Colson has recently given us a careful statement identifying some of the difficulties in drafting protests and describing means of avoiding them while still commnicating objections to other states.

Having said all this, however, the academic observer purporting to talk about international law cannot offer realistic comment on this aspect of state practice in the aggregate, and it is a very important aspect. On the other hand, some protest messages are available. As a result of a request, I have gotten the text of thirteen protests, most in 1985 and 1986, of the several dozen said to have been transmitted since 1982. I have no idea whether these are representative or even what standards would be relevant for deciding that. The article by David Colson indicates that the style of particular protests is crafted with the specific recipient in mind.

I intend to comment on one aspect common to several of these protests, after some preliminary remarks indicating the context for their consideration.

Two major international problems facing states in the aftermath of the decade and a half of preoccupation with LOS negotiations are the same as those which provoked those negotiations in the first place. These are the geographic extent of national jurisdiction and the scope of substantive competence within the jurisdictional boundary. Sometimes dissatisfaction with the scope of jurisdiction leads to changes in claims about its extent, in the hope of improving matters from the coastal state perspective. The Canadian claim to straight baselines in the Arctic is an example of this.

Although in practice claims concerning geographic extent and scope usually involve unilateral state action, as do the resulting protests, the outcome of the LOS negotiations adds an ingredient not formerly available. Nowadays national claims and third-party decision-makers alike sometimes invoke the LOS treaty to support their views as if the treaty provision prescribed the appropriate standard of conduct. Of course the claimants do not invoke the treaty *qua* treaty, but rather take the now familiar approach of arguing that the treaty principles are customary law principles. Not infrequently this approach is adopted even though there is little or no evidence of state practice to add to the supporting argument.

Lawyers will of course seize on any colorable authority they can cite to legitimate claims put forward on behalf of a cause. The reason for calling attention to this standard form of legal argumentation is that the LOS treaty is not in effect (which is not unusual in itself) but some very important participants in the LOS negotiations, especially the United States, have not signed the treaty and the latter state has firmly rejected it. At the same time, however, the United States takes the formal position that the non-seabed portions of the treaty are "generally reflective of customary law" which binds the world. It is not wholly clear what "generally reflective" is intended to convey, but apparently virtually all non-seabed provisions of the treaty are believed to be similar, if not identical, to the substantive prescriptions of customary international law.

In this context a major point to note about the stream of claims referring to LOS treaty principles as customary law is that sometimes the reliance on the LOS treaty appears to arise more from the general political usefulness of the reliance than from the soundness of the specific legal proposition at stake. In such a context it cannot be assumed that mere citation of the LOS treaty provision by a state, or by an arbitral tribunal, is sufficient to demonstrate that the legal proposition being asserted is actually supported by state practice. In my view the treaty is sometimes invoked as customary

law under circumstances that suggest the invoker has an extraneous agenda to fulfill that may outweigh belief in the validity of the legal propositions being advanced.

Among the U.S. protest messages referring to the LOS treaty as reflecting customary law, opposed to the views of the recipient state, references are made to transit passage both of aircraft and of vessels, archipelagic waters, archipelagic sea lanes passage, closing lines for bays, criteria for straight baselines, the absence of any requirement for authorization or notification of passage through the territorial sea, priority for allocations of surplus fishery resources in the exclusive economic zone, the scope of coastal state discretion to determine the allowable catch, harvesting capacity and surplus allocation, the extent of coastal state criminal jurisdiction in the exclusive economic zone, and, finally, the provisions of Article 76 on the extent of the continental shelf.

Although these messages are only a small fraction of the protests on LOS issues, they give evidence of a conscious effort to spread the message that the non-seabed portions of the LOS treaty and customary international law are the same. In my view there are serious doubts about the validity of assertions about the treaty and customary law in several of these messages. In others no serious question could fairly be raised. In my view the fervor of the campaign may have led to some serious mistakes. I will comment upon three messages.

The first two are the U.S. response to the recent claims by Ecuador and Chile to extend their continental shelves beyond 200 miles. In both instances the claims cited Article 76 of the LOS treaty as support, although Ecuador has not signed the treaty and Chile, while a signatory, has not ratified. Without going into detail, neither claim finds support in the substantive criteria of Article 76 even assuming it were applicable as such, which, of course, it is not.

The point here is that the United States protested both claims but not on the basis that Article 76 is irrelevant. The United States took the exact opposite tack, namely that Article 76, paragraphs 4 and 5, were already customary law but that the concrete circumstances of the two claims did not meet these criteria. In other words, the United States agreed that the appropriate decision criteria were to be found in Article 76.

It is this claim, apparently common to the three states, that the specific broad margin provisions of Article 76 are customary law that is of interest and worthy of comment presently. The broad margin provisions of Article 76 were laboriously negotiated, had no connection whatsoever with prior state practice, and still have no basis in contemporary practice. Apart from this specific incident, so far as I am aware, the United States has taken no position on the relevant parts of Article 76 and specifically has taken no position on Article 82 which was one of the main *quid pro quo* for the broad margin provisions of Article 76.

This being the situation -- no national position of the U.S. and virtually no international practice other than the claims under protest -- it hardly seems radical to raise a question about what is going on. With nothing but the LOS Convention in hand, for the United States in the context of zero state practice to insist that Article 76 is already customary law must come from some motivation arising elsewhere than an evaluation of state practice or of the 1982 treaty. Given the apparent urgency of the need for wrapping itself in the non-seabed portions of the treaty, it is not implausible to believe that the United States wishes to use every opportunity to convince others that

virtually all of the non-seabed provisions of the LOS Convention are already customary law, even those provisions which have none of the characteristics of customary law principles. We all know why this need might be felt. But sympathy for the dilemma is one thing, agreeing on the solution to it is a very different matter.

This particular situation seems to be an especially unappealing one for insisting on the status of the convention principles as customary law. The appearance, or perhaps it is better stated as the odor, of picking and choosing is unusually strong in this vicinity. The agreement on the broad margin provisions rested not only on the trade-off of revenue sharing beyond 200 miles, but also on the acceptance of an elaborate, especially created, third-party decision procedure designed to discourage easy claims and to assure that such claims as might be made were founded on a solid basis of scientific data regarding the critical characteristics of the area that justified the claim.

To take the position now that the Article 76 provisions on the foot of the slope and the depth of the sediment are a matter of customary law appears to dispense with the aforementioned safeguards as if they are insignificant. It is impossible to argue plausibly that the requirement for sharing revenue from operations beyond 200 miles is established customary international law -- no one in the world would believe that. And it is perfectly obvious that Article 76(8) and the contents of Annex II on the Commission on the Limits of the Continental Shelf are not found in the general practice of states. But if these are not also customary law, and the other paragraphs of Article 76 are customary law, then there can be no assurance founded in international procedures that coastal states claims beyond 200 miles have any substance to them other than air.

These points seem so painfully obvious that it is somewhat embarrassing to take the time here to make them. What we appear to be seeing in this instance is not too dissimilar to the attitudes demonstrated in other instances by the U.S. State Department and the U.S. executive branch generally in recent years of simple contempt for legal standards that do not fit their perceptions of need. If the requirements of law are not met, so much the worse for the law. It is safe to say that this attitude is not going to last forever and that its continuation is likely to prove costly to the United States in the sacrifice of important interests and the continued general loss of credibility on the international level.

A second instance of citing the LOS treaty as customary law by the United States, and therefore as the source of authority for a claim to jurisdiction, raises a question about the use of the treaty to support a claim to expand the scope of coastal state jurisdiction in the EEZ. It may be recalled, although only for the record since it hardly seems necessary otherwise, that the United States was among the principal states concerned with the question of the scope of jurisdiction if the institution of the exclusive economic zone were to be established in the LOS treaty. The United States was a leader in seeking to restrict coastal jurisdiction to functional purposes, as opposed to broad coastal state jurisdiction as a matter of principle, in order to safeguard the use of the EEZ for navigation and other lawful purposes. These were legitimate concerns and they elicited considerable legal creativity in establishing the various formula for distinguishing the EEZ from the territorial sea and for recognizing that vital high seas rights were to be available in the EEZ without serious encroachment by the coastal state.

It is because this issue was so carefully and deftly dealt with in the LOS negotiations and because the concept of the EEZ and the balance of rights therein are so critical to an evolution of the law of the sea preserving high seas rights that it is important to monitor the behavior of nations in claiming authority in this region. As in other instances, the views of the United States are of special interest in light of its general position and views.

For these reasons the recent incident, which has still not run its course, involving the United States claim to exercise its general criminal jurisdiction over certain specific activities aboard a foreign vessel in the U.S. EEZ brings into question the viability of the balance between coastal state functional jurisdiction and flag state jurisdiction. What this incident suggests is that this balance may be tenuous at best when events in the EEZ focus strongly felt concerns, even emotions, in the coastal state.

Perhaps many of you are not as familiar with this incident and its consequences as those of us living in the region of the Northeast Pacific Ocean where it has been reported in newspapers. Briefly what happened is that a female United States fisheries observer aboard a Korean fishing vessel (the FV *Shin Yang Ho*) in the U.S. EEZ alleged that she was sexually harrassed and assaulted by the vessel's captain. The captain was charged in the U.S. federal district court in Alaska for criminal violations of the Magnuson Act and implementing regulations and also under 18 U.S.C. Section 111 and 1114 which make it a crime to assault a person having the status of a federal employee as defined in the statute. In addition the vessel was seized in a civil forfeiture proceeding, which is still pending. Finally, the victim of the alleged assault filed a personal action for damages for the harm allegedly caused by the captain.

The above is a very sparse statement of the facts. The investigation report states that the "incident" allegedly occurred not once but repeatedly over the course of several days, *i.e.*, that there were repeated occasions of harrassment or assault. The allegations were very serious and understandably could lead to a determined effort to prosecute and to impose a severe criminal penalty.

When this case came to trial, the outcome was a hung jury on the allegations of sexual assault; the jury was split evenly on whether the case was made. Subsequently, the defendant pleaded *nolo contendere* to an harrassment charge and was fined $5000. The United States is continuing its efforts to forfeit the vessel and the victim continues to pursue a civil action for damages.

It is not wholly clear why the U.S. brought criminal charges under the federal assault statute in addition to the Magnuson Act since the latter raises no problem of jurisdiction under international law while the former appears to. The Magnuson Act criminal provisions all have to do with enforcing the legislation, hence the criminal jurisdiction claimed is directly tied to the purpose of the legislation and is not a general claim to criminal jurisdiction. On the other hand, it is fairly elementary law that general criminal jurisdiction is territorial, whereas the EEZ is not part of U.S. territory either as a matter of U.S. assertion or under international law. The United States does not assert jurisdiction on the nationality principle, based on the nationality of the victim. Since the incident occurred aboard a Korean flag vessel, there would be no quesiton that Korean law applied and, under most notions of jurisdiction, that Korea had exclusive jurisdiction in regard to general criminal law violations aboard the ship.

My understanding of the situation is that it was believed to be possible to apply the criminal provisions of the Magnuson Act only to impose a fine, whereas a conviction under the federal assault statute could also carry a prison term. Apparently there was the feeling that this incident was serious enough to warrant imprisonment. In addition, perhaps of equal or more importance, this was not the only time such incidents had occurred and there may have been thought that some deterrence was in order aimed at the individual as well as the ship owner who employs the captain and crew.

On 23 December 1986, Korea sent a diplomatic note to the U.S. regarding the U.S. actions. I have not been able to secure a copy of the note but assume that it was a protest to the assertion of U.S. criminal jurisdiction. According to the U.S. response, the Korean note referred to the exercise of U.S. criminal jurisdiction against the master of a Korean flag vessel on the high seas.

In brief, the United States note stated that the incident took place in the U.S. EEZ which was established consistently with Part V of the LOS treaty, "the nonseabed portions of which Convention the United States considers generally reflective of customary international law." But, the note continued, while high seas freedoms and principles are applicable in the EEZ, the treaty also provides "that high seas rules such as the exclusive juridiction of the flag state apply in the exclusive economic zone 'in so far as they are not incompatible' with the legal regime for that zone."

The note continues by stating that in the EEZ the United States has sovereign rights over "natural resource-related activities" (which is not what the LOS treaty provides) and that it has the "full legal right under international law to board, inspect and arrest ships engaged in resource-related activity and to take judicial proceedings as necessary, including the imposition of civil and criminal penalties for violations of resource laws and regulations, subject to any applicable limitation under customary international law or existing agreement."

The key part of the U.S. note immediately follows this quotation.

> Fundamental to the right of a state to manage and exploit the living resources of its exclusive economic zone is the ability to place enforcement and/or scientific observers on board foreign vessel permitted to fish therein. It is the view of the Government of the United States that, under international law, the United States likewise enjoys the full legal right to adopt and enforce legislation which is directed at the protection of fisheries observers in its exclusive economic zone. The right to exercise jurisdiction for this purpose, including criminal jurisdiction, is a natural concomitant of the sovereign rights of the United States over the management of its resources in its exclusive economic zone...

The note concluded by noting that Korea has jurisdiction over its flag vessels and the crews, but that in this particular case the United States had concurrent jurisdiction.

This note inspires some general comments. The note declares that the U.S. has sovereign rights not just over resources but over resource-related activities, but it does not define such activities. It seems to me that what is a "resource-related activity" is a critical question, because unless that category were narrowly conceived there would be considerable potential for vastly expanded coastal jurisdiction displacing flag state authority. Certainly it seems

fair to say that the coastal state has sufficient authority in the EEZ to carry out the functions that are specifically within its competence, *i.e.*, to exercise its sovereign rights over resources. And one does not have any serious doubt that the coastal state should be able to protect the officials who must be employed to carry out the practical steps required to exercise sovereign rights in the EEZ. If this is the extent of "resource-related" then one could not take exception to the U.S. position.

In the particular case, however, there was certainly a noncontroversial statutory base for exercising the protective jurisdiction that is undoubtedly needed in the EEZ for observers who undertake lengthy sojourns aboard foreign vessels fishing in the zone. The Magnuson Act and its implementing regulations were specifically directed to the very activity in question. That is, the Act was designed to deal with foreign fishing in the U.S. EEZ and its criminal sanctions were aimed at protecting personnel implementing the Act. But if this is so, and it seems to be a justifiable interpretation of the Act, why did the United States invoke the general federal assault statute which is aimed at protecting specified federal employees but not aimed at persons outside U.S. territory? It hardly seems a sufficient answer that the observer should reasonably be considered to fall within the category of "federal employee" protected by the statute. This does not answer the question of whether it is acceptable under international law to extend this legislation to events occurring outside the United States, especially when another federal statute was adopted for the specific purpose.

I speculated above about the possible reasons for the choices made in this instance. I do not know how the decision process works in these instances as between the Justice Department and the State Department and cannot comment on what considerations were weighed in making the initial decision to invoke the assault statute. My reservation is addressed to the State Department response, which raises a question.

The question is: how far does this notion of protective jurisdiction extend? Suppose, instead of assault, that the observer has been injured from other causes, such as defective machinery, or from hazardous substances, or from unsafe practices in operating harvesting or processing machinery. Do federal statutes and implementing regulations applicable to these and other matters within the United States now extend to events aboard foreign vessels in the EEZ? A somewhat similar question arises with respect to admiralty law, but this is generally applicable in private law suits and often involves standards common to most nations. In these latter instances there is usually no question of a threat to exclusive flag jurisdiction to control the ship or govern its lawful operations.

Of the three messages discussed here, the U.S. response to the Korean note is least objectionable because it is not all that clear that the U.S. expects to apply general criminal law or other general legislation to the EEZ, although perhaps this incident may lead to demands for that action. Additionally, one cannot read the investigative report in this incident without sympathy for the feeling in a prosecutor or others responsible that jurisdictional objections should not be determinative. It is part of the point I wish to make, however, that situations of this kind may lead to encroachments on jurisdictional arrangements that seek to safeguard international navigation and contribute to the breakdown of those arrangements.

Insofar as this Korean incident is concerned, one specific recommendation is that the Magnuson Act be revised to make it clearer than it now is that the specific criminal provisions and penalties in the Act extend

to observers who are hired by contract with third parties and are not officially employees of the United States. A more general implication is that legislation adopted for application in the EEZ should be drafted carefully to cover all legitimate coastal state interests, thus avoiding the temptation to resort to the general legal system of that state.

The overall problem of the United States in co-existing in a world where others accept the LOS Treaty but we do not will continue. My comments here are that the enthusiasm for having the benefits of the treaty should be moderated to be sure that the claims being made are soundly based on evidence of state practice that will firmly support the claim that a specific provision of the LOS treaty is also customary law. Excessive claims may turn out to be harmful to the interests of the U.S. and states generally.

Annex 44

R. A. KINZIE III, "CARIBBEAN CONTRIBUTIONS TO CORAL REEF SCIENCE", *OCEANOGRAPHIC HISTORY: THE PACIFIC AND BEYOND*, K. R. BENSON AND P. F. REHBOCK (EDS.), UNIVERSITY OF WASHINGTON PRESS, 2002

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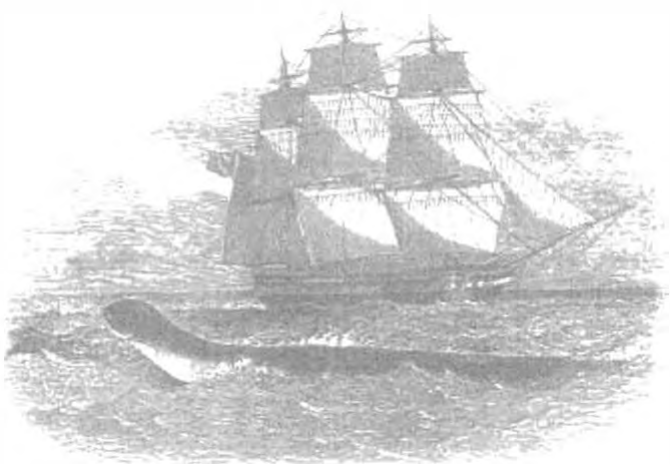

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Caribbean Contributions to Coral Reef Science

Robert A. Kinzie III[1]

Had Darwin visited the reefs of the Caribbean rather than those of the Indian Ocean in his voyage on the *Beagle*, early scientific perceptions of coral reefs might have been much different. Perhaps even today our concept of the nature of coral reefs is influenced in many subtle and implicit ways defined by Darwin's experiences and writings.

Certainly any comparison of the Indo-Pacific and the Caribbean must start with the obvious—the vast difference in size of the two seas. While this point is evident and at first glance apparently quantitative in nature, the disparity in areas leads directly to fundamental differences in how the two systems operate hydrographically, biologically, and biogeographically. Many such comparisons have been made and a recent workshop summarizes several of the biological features that differentiate the two regions.[2]

The same two geographic features (area and distance) have also influenced human activities in the two regions, politically, demographically, economically and, as I will try to show here, in the ways that coral reef science has developed in the Indo-Pacific and the Caribbean. To do this I will focus on the period of development (from 1900 to the late 1970s) of marine laboratories which were more or less specifically devoted to coral reef research in the Caribbean.

I will begin with a brief overview of the major physical-chemical and biotic-biogeographic characteristics, not with the goal of presenting a complete picture, but to highlight selected features which have shaped the way coral reef research stations have grown.

The Indian Ocean reefs to which Darwin devoted most of his writing on coral were typically atolls, far from the influence of major continents. From this sample scientists developed a picture of coral reefs as isolated and adapted to oceanic waters low in nutrients. This concept survives even today.[3] The Caribbean, unlike the central Pacific and Indian Oceans, is a Mediterranean sea. It is bordered to the south, west and north by continents and influenced by two of the largest river systems in the world with a combined drainage area of almost eight million km.[2]

For many coral biologists asked to make a comparison between Caribbean and Indo-Pacific reefs the first distinction that would come to mind would be the low diversity of the Caribbean. This perception is, to a great extent based on the diversity studies of Stehli and Wells, which dramatically picture the striking difference in coral generic diversity between the two regions.[4] However, the Caribbean is not simply a poorly populated relict of the once extensive Tethys Sea. Since the time of the differentiation of the Caribbean, it has acquired a new character of its own. In fact, the forces acting on the Caribbean reef biota today may have much to tell us about the development of modern reefs in general. The geographical situation of the modern Caribbean is in many aspects reminiscent of the Indo-Malayan region in the late Pliocene and early Quaternary times.[5] Today the Caribbean is unique both in terms of its distinctness from other coral regions of the world and in that it is a unitary system. This uniqueness extends to many aspects of the region, not only biological, but geographical, political, social and economic. It is these latter, human aspects that have influenced growth and development of the region in characteristic ways. I contend that the growth of coral reef laboratories has been influenced by the same factors.

The thesis underlying this paper is that coral reef research in the Indo-Pacific was characterized by a "big science" approach with involvement of a few large wealthy countries at high levels of the governmental bureaucracy. In contrast reef research in the Caribbean developed from many small foci in many countries. These efforts were frequently not funded at high levels and often originated from the efforts of a few or even single individuals.

The Caribbean as a Unique and Differentiated Region

Political and social features

The region consists of almost forty political entities including independent countries, departments, territories and colonies, all with vested interests in their coastal

resources.[6] These political units are concentrated into a small area not much more than 800 by 2000 km. No part of the Caribbean sea is beyond 200 nautical miles of land, so all of it falls within some country's jurisdiction. This close juxtaposition has long influenced interactions among Caribbean neighbor nations. There is a distinctive Caribbean culture spread from north-eastern South America to southern Florida and from Mexico to the Lesser Antilles. In recent years this history of shared background and interests has given rise to a range of multinational pacts and agreements. These include economic (e.g. Caribbean Basin Initiative), environmental (Cartagena Convention), and scientific (Association of Marine Laboratories of the Caribbean and the Caribbean Coastal Marine Productivity Program) agreements.[7]

Biological features

The marine biota of the Caribbean is also distinctive, a fact recognized by Ekman who designated it as part of the Atlanto-East-Pacific region.[8] In making this designation Ekman pointed out the distinctive character of the Atlantic Tethys fauna. Not only is the marine biota distinctive, but major ecological processes in the Caribbean appear to be different from those of other regions. The 1987 UNESCO workshop highlighted many of these differences.[9] One conclusion of the workshop was that the Caribbean was "continental" in terms of the rate of nutrient input. This characteristic makes the Caribbean similar to that of the Southeast Asian coast, particularly the coastline of the early Cenozoic, a similarity noted above. The relatively high nutrient status of the Caribbean is apparently reflected in several aspects of the ecology of the region, one clear example being the dominance of heterotrophic sponges and the paucity of phototrophic sponges relative to the Great Barrier reef.[10] The tight trophic linkage between the three great shallow water associations, mangroves, seagrass beds and shallow reefs is also characteristic of many areas of the Caribbean, but not a well developed interlinked system in the Pacific.[11]

The Caribbean as a Unitary Region (Biological Perspective)

In addition to its identity as a biogeographic province there is an even more compelling reason to consider the Caribbean as a unit. This unity is one of function. Several major perturbations have swept the Caribbean implying a close integration of the system as a whole. In 1938 the once thriving commercial sponge industry of Florida and the Bahamas was decimated by a sponge dieoff. The causes of this event and the geographical extent remain relatively poorly documented. However, in more recent times several more Caribbean-wide events have occurred which demonstrate the functional unity of the region. These include the mass fish mortality of 1980, the *Diadema* dieoff of 1983-1984 and severe coral bleaching which began attracting worldwide attention in the late 1980s.[12]

In the preceding paragraphs, I have argued that the Caribbean is unique in two senses of the word. It is distinctive from other coral reef regions, and it is unitary both in terms of structure and function. Many of these biological characteristics have counterparts in the world of human endeavors giving the Caribbean its local identity. While it is beyond the scope of this paper to present the underlying reasons for these characteristics, it is apparent that many of them are directly derived from a simple matter of scale. The Caribbean area is small, about an order of magnitude smaller than the Indo-Pacific, so distances between islands and coasts are correspondingly smaller. This fact has clearly been an important determinant of human activity in the region since pre-Columbian times. It has also had important ramifications in terms of the ecological make-up and processes in the reefs of the region. In the remainder of this paper I will explore the idea that these same features of small area, short distance between reef regions and proximity to major continents have also influenced the ways that coral reef laboratories developed in the first part of this century—ways that are markedly different from what was transpiring in the Indo-Pacific during the same period.

I also contend that the Caribbean is not simply a low diversity appendix dangling from the margin of the coral reef realm but that it has been the center of several of the most important modern developments in coral reef science. Many major players in reef biology and many major discoveries and insights have important Caribbean pedigrees.

The Caribbean as a Major Region of Coral Research

Smith reported that the Caribbean (excluding Bermuda) accounted for only nine percent of the world's coral reefs by area.[13] Nevertheless, in a recent tabulation, a disproportionate number of coral reef laboratories, relative to reef area, were

located in the Caribbean.[14] Additionally, the amount of material published on and about Caribbean reefs appears to be greater than would be expected from a simple correlation with reef area. At the Third International Coral Reef Symposium held in Miami in 1977 almost half of the papers dealt with Caribbean reefs. Certainly the location of the symposium was in a large part responsible for this fact. However, at the Sixth International Symposium held at Townsville Australia in 1988 and the Seventh Symposium held in Guam in 1992, papers on or about Caribbean reefs were still second and third most numerous respectively even though the both conferences were held far from the Caribbean. If all papers published in the journal *Coral Reefs* that have some geographic content are assigned to one of Smith's coral reef regions the number from the west Atlantic is also disproportionately large.

Major controversies with Caribbean Connections

Not only has research interest in the region resulted in a disproportionate publication output, but in several controversies that have done much to shape our current concept of coral reef function, researchers in the Caribbean have been major contributors. In the debate on the relationship between zooxanthellae and their coral hosts, Boschma, who worked at the Bermuda Biological Station contended that corals farmed the algae,[15] while Vaughan, who worked at the Dry Tortugas Laboratory, contended that corals were carnivorous.[16] In an extension of this discussion, Johannes studying Bahamian reefs found that zooplankton abundance might be too low to support coral biomass, while Sir Morris Yonge, who pioneered experimental coral reef field research on the Great Barrier reef, and Tom Goreau at Discovery Bay Marine Laboratory held that corals were at least omnivorous.[17] This debate was extremely fruitful in that its resolution established the foundation for our present understanding of coral trophic status.

Another debate with a strong Caribbean connection concerned the nature of coral reef fish community structure. In a simplified summary, Peter Sale, working on the Great Barrier reef, felt that at the species level, coral reef fish communities were dominated by stochastic factors operating on recruitment. On the other hand Smith and Tyler, who worked in the Caribbean, felt that there was evidence of underlying organization in the structure of the assemblages.[18] Again this debate has spurred much research that has advanced our understanding of how all biological communities should be understood.[19]

Yet another important controversy, central to our understanding of how reefs develop, was centered on the rate of reef growth in the Indo-Pacific vs. the Atlantic. From Darwin's time until recently, most reef workers felt that Pacific reefs exhibited more vigorous growth and produced more substantial structures than did Caribbean reefs. However drilling studies in the Caribbean carried out in the early 1970s suggested that Caribbean reefs might be growing even faster than Indo-Pacific reefs.[20] The resolution of this controversy, much like that concerned with fish community structure discussed above appeared to follow from an understanding of differences in scale and methodological approach rather than any fundamental differences in biotic processes.[21]

Why should an area which comprises such a small fraction of the world's coral reef area feature so strongly in reef research? Reasons must include the fact that travel from major countries of North, Central and South America to Caribbean continental and island reefs is inexpensive, fast and easy when compared to travel to many parts of the Indo-Pacific. In many Caribbean countries, tourism, particularly that associated with the sea, is an important part of the local economy, travel restrictions are often minimal, language is rarely a problem, and access to reef areas is facilitated by an extensive infrastructure. Each of these features is a direct result of the geographic, economic, and social attributes of the region as outlined above. As will be detailed below, these same features have played a part in allowing individuals, small groups and small educational institutions with limited resources to establish working laboratories dedicated to reef study in the Caribbean.

I believe that several of the features that make the Caribbean unique biologically as well as sociopolitically have also contributed to the way that coral reef science developed in the region. In particular, the origins of field research stations and coral reef marine labs are a product of the spatial, social, and political nature of the region. In contrast to the growth of coral reef science in the Indo-Pacific, the Caribbean has a strong "small-science" trend in its history which is reflected in the way that coral reef laboratories developed.

In the Pacific, vast distances, territorial interests of a few major powers (US, France, Japan, and more recently Australia) have led to a "big science" approach with national agendas that included coral reef science as a part (often a small part) of a larger plan. In other words the Pacific was seen as a huge pie cut into very large slices by those countries that could afford to do so. Coral reef science was, in the first part of this century, typically an adjunct of heavily institutionalized big science. The other papers in this section, particularly Dr. Tracey's, give concrete examples of this trend as well as the flavor of how the "big science" approach operated in the Indo-Pacific. In contrast, most coral reef laboratories in the Caribbean have grown out of very small beginnings, and in many cases the development of the ability to carry out field research on reefs was the primary motivation, as opposed to laboratory development in the Pacific where reef research was often only a small part of much larger initiatives.

Five main modes of reef laboratory development can be discerned in the first part of this century. Many laboratories have actually been influenced by more than one of these modes, but typically one is dominant. I will briefly outline these and then go on to elaborate one which I consider to be of particular interest, not only to historians of coral reef research, but also to those who are interested in the birth and growth of scientific initiative. Not all laboratories in the Caribbean that feature reef research can be included in this discussion, rather I have selected some which illustrate my thesis. I will focus here on the development of laboratories where reef science is a major focus even though there have been important investigations of Caribbean reefs that were not directly associated with marine laboratories.

1) Coral Reef Laboratories as an Integral Part of an Existing University.

This developmental model is typical of many Latin American laboratories. Also many of these laboratories, with their responsibilities to university departments, are less specifically focused on coral reefs. Examples include Instituto de Investigaciones Marinas de Punta Betín (Colombia), the field station of CIMAR of the school of Biology at University of Costa Rica, Centro de Investigaciones Marinas of the University of Havana, Instituto de Ciencias del Mar of the University of Panamá, and the Instituto de Technología y Ciencias Marinas of the University of Simón Bolivár in Venezuela. The research at many laboratories in Latin America is focused on building inventories of the mostly unknown reef resources of these countries. While many of the publications are in Spanish, there is a growing awareness of the importance of this work. Rosenstiel School of Marine and Atmospheric Science in Miami has established a section in their library to deal with Spanish language research in the Caribbean. The Port Royal Marine Laboratory in Jamaica was founded in 1955 as part of the University of the West Indies' Zoology Department. An important North American representative of this mode of development is today known as The Rosenstiel School of Marine and Atmospheric Science. This research facility with interests including but not restricted to coral reef research was established as the marine laboratory of the University of Miami in 1943.

2) Coral Reef Laboratories established through Endowments.

In a few cases coral reef research laboratories were established in association with a university but through the financial auspices of a philanthropist. Two notable examples are Bellairs Research Institute in Barbados and the West Indies Laboratory in St. Croix. Bellairs Research Institute was founded and endowed in 1954 by Commander C. W. Bellairs. The institute was, from its inception, associated with McGill University in Quebec. While today, research at the Institute covers many aspects of marine science, the efforts of the first director Dr. John B. Lewis of McGill made Bellairs a major coral reef research facility. The West Indies Laboratory (WIL) was built in 1970, with an endowment from former New Jersey State Senator Fairleigh S. Dickinson Jr., who was also chairman of the board of trustees of Fairleigh Dickinson University (FDU), thus the WIL and FDU had a direct association from the outset. WIL continued in existence until 1989 when Hurricane Hugo severely damaged the facility. The Laboratory's first director, Dr. Grey Multer, was a geologist with interest in reef geology so, like Bellairs, WIL was primarily a coral reef laboratory.

3) Mixed Modes.

Some coral reef laboratories in the Caribbean arose from a combination of circumstances, funding bases, areas of research interest and affiliations. For example, the Caribbean Marine Biological Insti-

tute (CARMABI) in the Netherlands Antilles was established as a government funded research institution in 1956 primarily for fisheries research. Only in 1969 was coral reef research included as a major mission. Today the CARMABI Foundation is associated with the STINPA Foundation of the Netherlands Antilles National Parks. Both organizations deal with terrestrial as well as marine projects tending to focus on research (CARMABI) and management (STINPA). Other laboratories with some interest in coral reef studies are associated with scientific foundations (e.g. Estación de Investigaciones Marinas de Isla Margarita - Fundación La Salle and Fundación Científica los Roques in Venezuela, Smithsonian Tropical Research Institute (STRI) in Panamá), or else associated with coastal management and fisheries research (e.g. Institute of Maritime affairs in Trinidad and Tobago and the Fisheries Research Laboratory in Puerto Rico). Since reef associated fisheries such as conch and lobster are economically important throughout the Caribbean, fisheries agencies of all countries have some reef aspects as part of their programs. Research at STRI includes a great deal of terrestrial work, however, this institution has also become a major center of coral reef research. While geographically not in the Caribbean, Bermuda is part of that biogeographical region due to the influence of the Gulf stream. One of the earliest laboratories in the west Atlantic to emphasize coral reef study was the Bermuda Biological Station for Tropical Research. This station was established in 1903 through the joint efforts of the Bermuda Natural History Society, Harvard University, New York University, and the Royal Society.

4) Small Field Stations.

A fairly recent development is the appearance of small field stations that often supplement facilities at established permanent research laboratories devoted to coral reef research in the Caribbean. These are small, sometimes temporary, laboratories or programs, typically administered by colleges and universities in North America which exist primarily for the purpose of providing students with a coral reef experience. One or a few field courses are offered, sometimes seasonally and facilities are either obtained through tourist accommodations or else are quite simple. Examples include the Carriaco School for Marine Sciences and several new stations in Belize.[22] In recent years there has been a flourishing of such programs which are too numerous and sometimes to ephemeral to list.

5) Individual Efforts.

Several important Caribbean laboratories that have been instrumental in developing coral reef science in the first part of this century had their origin in a pattern that seems a particular response to the nature of the Caribbean. In these instances a single individual, or a very small number of people who had a personal interest in coral reef science, through great personal effort, established a laboratory that at least during early stages was often closely associated with that individual's research program.

The first such effort, and in fact one of the first permanent laboratories ever devoted to the study of reefs, was the Tortugas Marine Laboratory established in the Dry Tortugas, Florida in 1904. A history of the development of this laboratory has been written by Pat Colin.[23] Briefly, in 1902 the trustees of the Carnegie Institution approached Alfred G. Mayor asking him to develop a research facility for tropical marine biology. The laboratory opened in 1904 and continued under the close supervision of Mayor, essentially until his death in 1922. During that time the lab grew to prominence partly due to the impressive array of world renowned marine scientists who were visitors, but primarily because of Mayor's energy and dedication. While funding was provided by the Carnegie Institution, it was Mayor's work that marked the lab with a strongly personal flavor.

This mode characterized by the efforts of a single or very few individuals has characterized the development of several other coral reef laboratories in the Caribbean in the mid 20th century. In 1954 the Institute of Marine Biology of the University of Puerto Rico (UPR) was established with its headquarters at the Mayagüez campus of UPR. The field station, which later became the main laboratory, was located at La Parguera. Juan Rivero of UPR was the first director of the Institute. The lab started in a building that had previously been occupied by the US Fish and Wildlife Service.[24] Starting in 1954 Rivero began a vigorous building program at the field station. Not only was Rivero director of the Institute of Marine Biology, but he also directed the zoological garden which shared Mayagüez island with the marine laboratory. Rivero continued to build the laboratory, acquired

research vessels and extended the building program until 1962 when he took the position of dean of the College of Arts and Sciences at UPR and Dr. J. Randall took over as director of the Institute of Marine Biology. While the development of this lab was directly related to the University, its establishment and early growth were largely through Rivero's efforts and his vision of a major marine research facility for Puerto Rico. This research institute is today a major coral reef laboratory.

A similar development of a reef research laboratory under the auspices of a University, but spearheaded through the efforts of a few dedicated individuals is exemplified by the early stages of Estacion de Investigaciones Marinas "Puerto Morelos" in Quintana Roo Mexico. In 1976 the lab occupied a part of a small tourist camp a few km south of Cancun, which was not yet the major tourist destination it would become. A handful of coral reef students used facilities at a small fishing port to initiate studies of Mexico's understudied Caribbean reefs. The work continued while planning and eventual construction of a modern research facility was under way. The station officially opened in 1984.

Perhaps the most striking example of the impact of an individual in the development of not only a major coral research laboratory, but also a new approach to coral reef science, was the effort of Tom Goreau in establishing the Discovery Bay Marine Laboratory in Jamaica. In 1951, Goreau was hired by the University of the West Indies to teach in the Physiology Department of the Medical School. For his Ph.D., Tom had worked on coral physiology at Yale University so the opportunity to work in the Caribbean was attractive to him. Starting in about 1955 Tom traveled around Jamaica's coast pulling a small boat behind his Landrover, looking for a reef site to study. Originally, Tom chose Pear Tree Bottom near Runaway Bay as the ideal reef location, and he began planning a field facility. However, logistic difficulties resulted in Discovery Bay being the final choice. In 1965 permission was obtained to use an abandoned shed on property belonging to Kaiser Bauxite Co. on the east side of the bay. Funding for this effort came from the New York Zoological Society and later from the State University of New York at Stony Brook. This facility, "the old lab," only functioned from 1965 to 1970 when the new lab across the bay was opened. Tom died later the same year. However during that brief period an impressive list of major scientists visited and often worked at the lab. Among the senior visitors were Sir Morris Yonge, John Wells, and Willard Hartman who collaborated with Tom, Sir Alister Hardy, Larry Slobodkin, Irenäus Eibl-Eibesfeldt and Paul and Llewellya Colinvaux. Additionally many important coral reef scientists of the day either visited or worked at the lab including Len Muscatine and Peter Glynn. Perhaps even more important was the number of young scientists and graduate students who did their early work at the Discovery Bay Marine Lab and who have gone on to become major contributors of coral reef science including Judy Lang, Gary Vermeij, Dave Barnes, Lynton Land, Phil Dustin, Henry Reiswig, Bob Trench, Jim Porter and Jeremy Jackson among many others. Not only did the facility grow physically into the lab it is today, but Tom's approach to coral reef research set the stage for a new way of looking at and working on Coral reefs. In the discussion following a paper Tom presented at the Biology of Hydra Meeting Steve Wainwright commented "First I'd like to wave a small flag because you who have trays of Hydra in your laboratory and even you oceanographers with laboratories in a ship don't have any idea under what difficulties Dr. Goreau is working and what he has done in taking his laboratory down onto a reef. Think of diving to 100 feet with 200 pounds of machinery on your back and then doing a critical experiment using glassware, radioisotopes and living animals."[25]

What many today consider to be normal methodology for working on reefs was unheard of until developed by Tom. There is no clear choice as to which was the greatest accomplishment of the Discovery Bay adventure; the development of today's major laboratory at that location, the fostering of such an array of young researchers, or the direct on-site approach to reef studies.

Can Big Science Survive in the Caribbean?

In 1970 a group of workers from the Smithsonian Institution organized a plan to bring together a wide array of the top coral reef biologists and geologists to formulate an approach like that of the International Biological Program to study coral reefs.[26] The site chosen for this project was Glover's Reef in Belize. The workshop to plan this project, to be called Comparative Investigations of Tropical Reef Ecosystems (CITRE), was held in November 1971 with fund-

ing for the planning stages provided by NSF.[27] More than forty of the world's foremost reef scientists participated in an array of working groups to design a massive research program.

The project was never funded, but subsequently two of the individuals from the Smithsonian, Arnfired Antonius and Klaus Rutzler, hit upon Carry Bow Cay as a potential site for a Smithsonian Reef Research Laboratory. Along with Ian Mcintyre, also of the Smithsonian, they started by renting space from the owner of the island and commenced surveys of the rich reefs nearby.[28] Today Carry Bow Cay is an important adjunct of the Smithsonian Institution, but it clearly falls into the category of "small science."

Recently there have been several large scale programs initiated in the Caribbean region (e.g. CARICOMP and CARIPOL). Significantly these were not originated in a single country which maintains control of the operation. Instead they are typically cooperative, multinational and based on the numerous existing marine biological laboratories throughout the region.

Summary

This paper was written with a clearly limited scope. Caribbean laboratories that are not primarily focused on coral reefs (e.g. Lerner and Cape Haze Marine Laboratories, oceanographic institutes, etc.) have not been considered. Also the temporal focus has been on the period from the early 1900s to the 1970s. Since that time many stations have proliferated throughout the region arising from diverse needs and backgrounds. Additionally in recent years there have been major new initiatives and cooperative agreements among Caribbean nations focused on coral reef ecosystems. Nevertheless, even with this rather limited focus, a picture emerges that clearly suggests that small science in the development of reef research facilities in the Caribbean was an important mode of laboratory development. This bias is traced to geographic, economic and social features of the region, and contrasted with the vast area, long distances and difficulty of travel in the Indo-Pacific. Partly because of the compact nature of the Caribbean, individual efforts have been particularly successful in establishing major facilities for studying coral reefs. While the Caribbean is a small pond, its history of research on reefs and its logistical advantages will continue to make it a center of reef research excellence. ■

Notes

1. Zoology Department University of Hawaii and Hawaii Institute of Marine Biology Mailing Address: 2538 The Mall, University of Hawaii, Honolulu, Hawaii 96822. Preparation of this paper was greatly aided by comments, reminiscences and documents from Sid Anderson, Rolf Bak, Phil Dustin, Ivan Goodbody, Dave Greenfield, Eric Jordan, Judy Lang, John Lewis, Charlene Long, Grey Multer, John Ogden, Jack Randall, Robert Richmond, Bob Trench, Ernest Williams, Jeremy Woodley and especially Ann and Henry Reiswig. Thanks are due to Daphne Fautin for organizing the section on The History of Coral Reef Research. Financial support from Florida Institute of Oceanography allowed me to attend the ICHO V meeting in La Jolla.

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Annex 45

E. D. BROWN, "ROCKALL AND THE LIMITS OF NATIONAL JURISDICTION OF THE UNITED KINGDOM", PART 1, *MARINE POLICY*, IPC BUSINESS PRESS, 1978

Rockall and the limits of national jurisdiction of the UK

Part 1

> From this wave-washed mound
> Unto the furthest flood-brim look with me;
> Then reach on with thy thought till it be drowned.
> Miles and miles distant though the last line be,
> And though thy soul sail leagues and leagues beyond,
> Still, leagues beyond those leagues, there is more sea.
>
> Dante Gabriel Rossetti, 'The Choice'

E.D. Brown

This article forms the first of two parts in a major examination of the Rockall question. The first two of five main sections are published here: after a general introduction, the author analyses the law governing the delimitation of the continental shelf, the EEZ and exclusive fishing zones, as regards the determination of the outer limit, delimitation between neighbouring states, and the particular rules relating to islands and rocks. This article forms an essential background to Part 2, in which the author will examine the geography and geology of the Rockall area and the claims made by the UK, Ireland, and Denmark, before drawing conclusions from the total analysis.

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continued on page 183

The Island of Rockall was annexed on behalf of the Crown and thus became part of Her Majesty's dominions in 1955. It was subsequently 'incorporated into that part of the United Kingdom known as Scotland' by the Island of Rockall Act 1972, thereby becoming subject to the law of Scotland.[1] My purpose here is to consider how many of the sea's 'leagues and leagues beyond' can be claimed by the UK in the area around 'this wave-washed mound'. More prosaically, the object is to examine the question of the delimitation of 'the area within the limits of national jurisdiction' of the UK in what, in this article, will be called 'the Rockall sector', that is, very roughly, the area to the north and west of Scotland and Ireland, bounded to the south by the line of latitude 54°N and to the west by the line of longitude 20°W (see Figure 1).

In the context of this article, the phrase 'the area within the limits of national jurisdiction' is taken to refer to (i) the area of the continental shelf, (ii) the area of the exclusive economic zone (EEZ), and (iii) the area within UK fishery limits as declared by the Fishery Limits Act 1976. At the time of writing (March 1978), the UK has not laid claim to an EEZ as such, nor has the Third United Nations Conference on the Law of the Sea (UNCLOS III) succeeded in reaching final agreement on even those draft articles in its negotiating text which deal with the EEZ. Since, however, the two concepts of the continental shelf and the EEZ are so closely related, it would hardly be sensible to exclude reference to the EEZ simply because UNCLOS III has not yet completed its work.

The article falls into four major sections, the first of which is published in this issue of *Marine Policy*. The remaining sections will

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Rockall and the limits of national jurisdiction of the UK: Part I

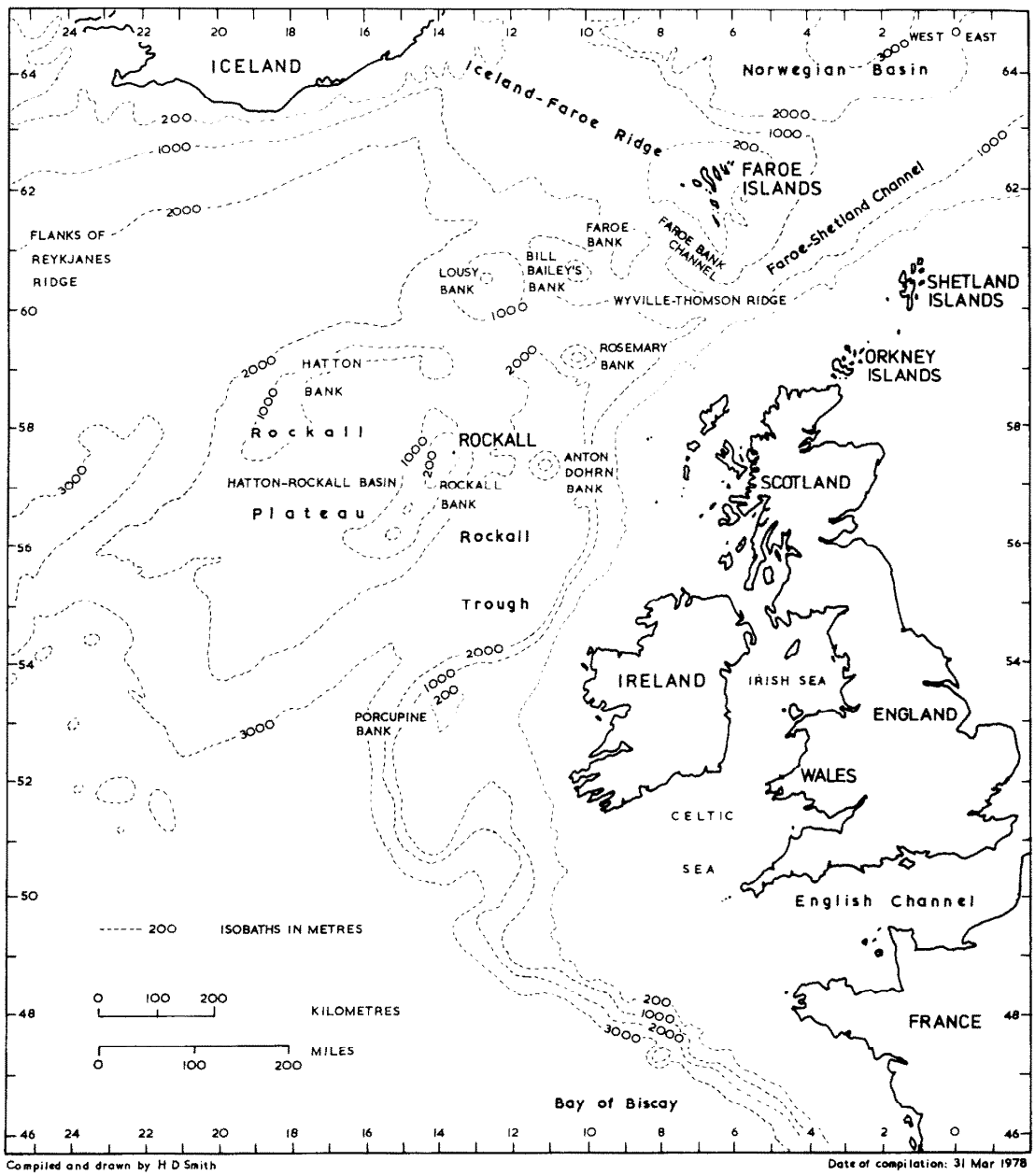

Figure 1. Topography of the Rockall Sector.

appear in the October 1978 issue. Following this introduction, a survey is presented of the law governing the delimitation of the continental shelf, the EEZ and exclusive fishing zones, thus providing a general legal background for the more particular analysis in sections II-IV. Section II will consist of an inquiry into the geography and geology of the area. In section III, the claims made by the UK, Ireland and Denmark will be examined in the light of the rules analysed in section I

and the geographical and geological information provided in section III. Finally, conclusions will be presented in section IV.

I. The Law

Delimitation of the continental shelf

Of the three states with an interest in the Rockall sector, Denmark and the UK are parties to the Geneva Convention on the Continental Shelf (1958), but Ireland is not. It is necessary, therefore, to consider both the conventional rules on delimitation and those prescribed by international customary law. Since, moreover, the status of the 1958 Geneva rules is now somewhat doubtful, and agreement seems to be fairly near in UNCLOS III on the conventional rules which will replace them, it is also necessary to refer to the latest version of the UNCLOS III negotiating text.

The outer limit of the continental shelf

The location of the three riparian states is such that it is only in relation to its western segments that the line of delimitation of the continental shelf has to be drawn by reference to the rules on the outer limit. The remaining segments must be drawn in accordance with the rules on delimitation between neighbouring states.

Limitations of space forbid a full analysis of the rules on the outer limit and the reader must be referred to an earlier study for much of the supporting argument.[2] Attention is focused here on the principal landmarks in the development of these rules, especially where they are relevant to the determination of the outer limit of the continental shelf in the Rockall sector.

The Geneva Convention. Article 1 of the Geneva Convention provides that:

> For the purpose of these Articles, the term 'continental shelf' is used as referring (a) to the sea-bed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 200 metres or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas; (b) to the sea-bed and subsoil of similar submarine areas adjacent to the coasts of islands.

This Article raises many difficult questions of interpretation. Does the very use of the term 'continental shelf' mean that the extent of the area in question is limited by reference to either the geological continental shelf or some other geological feature such as the continental slope, continental rise or continental margin? Does the word 'adjacent' imply some limitation upon the seaward extension of the continental shelf? What is meant by exploitation (is the reference to technological exploitability or economically feasible exploitation)?

On the basis of a study of the ordinary meaning of the language of the Convention, the intention of the parties as reflected in the *travaux préparatoires* and in subsequent state practice, and of the intended function of the Convention, I came to the conclusion, in a work published in 1971, that the continental shelf extends to the submarine area beyond the territorial sea which is:

- Adjacent to the coastal state, in the sense that the *area* (not merely any random point within the area) must satisfy the 200-

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contacted at the Law Department, UWIST, King Edward VII Avenue, Cardiff CF1 3NU, UK.

Professor Brown is indebted to Dr Hance Smith, Centre for Marine Law and Policy, UWIST, for compiling and drawing the maps included in the two parts of this article and for advising on geography.

[1] Since the UK's sovereignty over Rockall does not seem to be disputed by Denmark or Ireland, the question is not considered in detail in this article. It appears to be the case, however, that the 'Irish Government has reserved its position on the British claim to Rockall itself...' (according to 'Background Information' issued for Irish Department of Foreign Affairs in April 1975 and cited by C.R. Symmons, 'Legal aspects of the Anglo-Irish dispute over Rockall', *The Northern Ireland Legal Quarterly*, Vol 26, 1975, pp 65-93, at note 24a).

[2] E.D. Brown, *The Legal Regime of Hydrospace*, Stevens and Sons, London, 1971 and 'The continental shelf and the exclusive economic zone: the problem of delimitation at UNCLOS III', *Maritime Policy and Management*, Vol 4, No 6, 1977, pp 377-408.

metre depth criterion *or* the exploitability criterion continuously and without a break from the outer limit of the territorial sea to the extremity of the area claimed. It is recognized, however, that, on equitable grounds, exceptions may be permitted for relatively narrow deeps or troughs in the shelf.

- *Either* not more than 200 metres in depth *or*, if greater than 200 metres, of such depth that the natural resources of the sea-bed and subsoil are exploitable (exploitability being understood to mean economically feasible exploitability).[3]
- Not more than a reasonable, but yet to be defined, distance from the coast. In determining what is reasonable, regard should be had *inter alia* to the question of (i) whether the economic exploitation of the resources of the area is dependent upon the cooperation of the coastal state and (ii) whether the exploitation of the area by foreign states would constitute a potential security threat to the coastal state unless subject to its jurisdiction and control. In my opinion, Article 1 of the Geneva Convention cannot be properly interpreted so as to restrict the extension of the shelf by reference to the geological character of the seabed.[4]

North Sea Continental Shelf cases (1969). At first sight, a number of dicta in the Court's Judgment[5] seem to offer clear guidance on the interpretation of the rules governing the determination of the outer limit of the continental shelf. Germany not being a party to the Geneva Convention, the Court's Judgment was of course given on the basis of international customary law. Since, however, the Court appeared to regard Article 1 of the Convention as being declaratory of international customary law,[6] it is arguable that the various dicta which relate to the outer limit may be read as relevant to the interpretation of Article 1.

A number of passages call for consideration. First, in paragraph 19, there is a reference to

> ... what the Court entertains no doubt is the most fundamental of all the rules of law relating to the continental shelf, enshrined in Article 2 of the 1958 Geneva Convention, though quite independent of it – namely that the rights of the coastal State in respect of the area of the continental shelf that constitutes a natural prolongation of its land territory into and under the sea exist *ipso facto* and *ab initio*, by virtue of its sovereignty over the land, and as an extension of it in an exercise of sovereign rights for the purpose of exploring the sea-bed and exploiting its natural resources. In short there is an inherent right. In order to exercise it, no special legal process has to be gone through, nor have any special legal acts to be performed. Its existence can be declared (and many States have done this) but does not need to be constituted. Furthermore the right does not depend on its being exercised.[7]

This much-quoted passage is not difficult to understand in the context of the North Sea or any similar semi-enclosed sea. It is not at all simple to understand, however, if considered in relation to the question of the outer limit of a continental shelf bordering the ocean.

The Court refers to the 'continental shelf' and not to the 'continental slope' or 'continental rise'.[8] In the North Sea area in question, there is only a continental shelf and no slope or rise. Clearly, therefore, 'the natural prolongation of land territory into and under the sea' refers in this area only to the geological continental shelf.

Looking at a typical case of a coast bordering the open ocean, the position is more difficult. First, no one will deny that the coastal state

[3] See further Brown (1971), *op cit*, Ref 2 (1971), p 7.
[4] See further Brown *op cit*, Ref 2 (1971), Chapter 1.
[5] *North Sea Continental Shelf, Judgment, ICJ Reports 1969*, p 3.
[6] The ICJ at p 39 of its Judgment in the *North Sea Continental Shelf* cases (1969), described Articles 1 to 3 of the Convention as 'being the ones which, it is clear, were then [in 1958] regarded as reflecting, or as crystallising, received or at least emergent rules of customary international law relative to the continental shelf, amongst them the question of the seaward extent of the shelf'. There can be little doubt, therefore, that the Court itself also acknowledged Article 1 to be declaratory of international customary law.
[7] *ICJ Reports 1969*, p 22.
[8] On these terms see Part 2, Section II, to be published in *Marine Policy*, October 1978.

enjoys *ipso facto* exclusive rights in the geological continental shelf which forms a natural prolongation of its land territory down to a depth of 200 metres. But, despite the Court's reference to Article 2 of the Convention as enshrining the fundamental rule, the Convention does not speak of natural prolongations of territory but subjects the coastal state's sovereign rights over the submarine areas beyond the 200-metre isobath to the condition of exploitability. The quality of being a natural prolongation, then, is insufficient unless linked with exploitability and, indeed, it is difficult to show that the quality of natural prolongation is even a necessary condition in all cases.[9]

More important, however, is the meaning to be attributed to 'natural prolongation of land territory into and under the sea' in the context of a coast bordering the open ocean. It is surely right to stress that this phrase is prefaced by the words 'the area of continental shelf that constitutes...'. It is a possible construction of this language to read it to refer to the continental terrace or continental margin but it is scarcely the most probable meaning of this passage. This is so for two reasons. First, no reference is made to any term other than continental shelf and one might have expected a mention of 'slope', 'rise', 'terrace' or 'margin', had this meaning been intended.[10] Second, to ascribe this meaning to the Court is to imply that, in the Court's view, the coastal state has an *ipso facto, ab initio* exclusive right to the whole terrace or margin, irrespective of whether it is exploitable. In view of the Court's reference to the Convention, this hardly seems likely. Had it intended to endorse Professor Jennings' (subsequently expressed) view that the exploitability criterion is now *functus officio*,[11] surely it would have said so. While it is reasonable to regard the whole natural prolongation of the land in the North Sea as being *ipso facto* part of the legal continental shelf, it is not at all reasonable to so regard the whole natural prolongation of other coastal territories unless or until it is exploitable.

In the light of these remarks, it is submitted that this passage – certainly in isolation – throws very little light on the question of the outer limit and is better read in the context of the area to which the Judgment relates.

Nor is this conclusion affected by another passage (paragraph 43) in which the Court returns to the notion of natural prolongation. After referring to the principle of 'the natural prolongation or continuation of the land territory or domain, or land sovereignty of the coastal state, into and under the high seas, via the bed of its territorial sea which is under the full sovereignty of that state', the Court went on to say that:

> What confers the *ipso jure* title which international law attributes to the coastal State in respect of its continental shelf, is the fact that the submarine areas concerned may be deemed to be actually part of the territory over which the coastal State already has domain – in the sense that, although covered with water, they are a prolongation or continuation of that territory, an extension of it under the sea.[12]

Turning next to paragraph 41, on adjacency, there can be little doubt that, given economic incentive, technology will, sooner or later, provide the means to exploit submarine resources at any depth. When that time comes, the only limit on the seaward extension of the continental shelf will be provided by the concept of adjacency.[13] The Court's reference to this concept is, therefore, of particular interest.

Referring to the term 'adjacent to', the Court commented that

[9] See further Brown (1971), *op cit*, Ref 2 (1971), Chapter 1.

[10] See also p 51, Para 95 of the Judgment: 'The institution of the continental shelf has arisen out of the recognition of a physical fact; and the link between this fact and the law, without which that institution would never have existed, remains an important element for the application of its legal regime. The continental shelf is, by definition, an area physically extending the territory of most coastal States into a species of platform which has attracted the attention first of geographers and hydrographers and then of jurists. The importance of the geological aspect is emphasised by the care which, at the beginning of its investigation, the International Law Commission took to acquire exact information as to its characteristics, as can be seen in particular from the definitions to be found on page 131 of Volume I of the *Yearbook of the International Law Commission* for 1956'.

Page 131 contains definitions of *inter alia* continental shelf, continental slope and continental terrace. It surely follows that the Court, had it intended the phrase 'continental shelf that constitutes a natural prolongation of its land territory' to encompass the 'slope' (and possibly also the 'rise'), would have made some specific reference to it.

[11] R.Y. Jennings, 'The limits of continental shelf jurisdiction', *International and Comparative Law Quarterly*, Vol 18, No 4, 1969, p 819, at pp 831-832.

[12] *ICJ Reports 1969*, p 31.

[13] As will be seen in Section III, (in October 1978 issue of *Marine Policy*) the UK apparently regards the exploitability criterion as obsolete already, thought it can hardly be said that technology allows of exploitation at any depth.

> it is evident that by no stretch of the imagination can a point on the continental shelf situated say a hundred miles, or even much less, from a given coast, be regarded as 'adjacent' to it, or to any coast at all, in the normal sense of adjacency, even if the point concerned is nearer to some one coast than to any other. This would be even truer of localities where, physically, the continental shelf begins to merge with the ocean depths.[14]

I had already commented, before the Court's Judgment, on the illegitimacy of considering isolated *points* rather than *areas* when determining adjacency.[15] But, in any case, though at first sight this passage might appear to imply that adjacency requires that the continental shelf may never extend to 'a hundred miles, or even much less', in fact, when read in its proper context, it bears no such implication. This passage occurs in a section of the Judgment in which the Court is at pains to deny any necessary identity between 'adjacency' and proximity and to minimize the significance of the concept of proximity as compared with the fundamental notion of prolongation of territory. The 'notion of adjacency', it is stressed, 'only implies proximity in a general sense'. Thus, the fact that there are *points* in the North Sea 170 miles or more from the nearest coast which are not adjacent to any coast ('in the normal sense of adjacency') does not lead the Court to the conclusion that they are not within the scope of any coastal state's sovereign rights in the continental shelf, but rather to the implied assumption that they *are* because they lie on the natural prolongation of a riparian state's territory under the sea.[16]

The conclusion must be that unless isolated *obiter dicta* are read out of context and subjected to very liberal construction, there is nothing in the Court's Judgment which lends the weight of the Court's authority to either of the following contentions: first, that the outer limit of a continental shelf bordering the ocean at present coincides with the line marking the seaward limit of the natural prolongation of the land territory into the sea;[17] second, that the criterion of adjacency necessarily limits the seaward extension of the continental shelf to a distance from the coast of much less than 100 miles.

It must be added, however, that, given the respect normally accorded to the judgments of the 'principal judicial organ of the United Nations'[18] and the very considerable difficulty states have experienced in reaching an agreed definition of the outer limit, it was only to be expected that these *obiter dicta* would be widely relied upon to support varying points of view on this question; and so it has turned out. As will be seen,[19] the UK would appear to have relied heavily on the Judgment in formulating its continental shelf policy in the Rockall sector, as have the draftsmen of relevant articles in UNCLOS III's Informal Composite Negotiating Text.

The Anglo-French Continental Shelf Case (1977). Inevitably, the 'natural prolongation' dicta of the ICJ were cited in the pleadings in the recent Anglo-French arbitration and commented upon by the Court of Arbitration in its Decision of 30 June 1977.[20] The Court quoted, apparently with approval, the passage in the Judgment in the *North Sea* cases in which the ICJ described the principle that a coastal state has inherent rights in the continental shelf which constitutes the natural prolongation of its land territory as 'the most fundamental of all the rules relating to the continental shelf'.[21]

The Court's Decision is considered further below in relation to the

[14] *ICJ Reports 1969*, p 30.
[15] 'The outer limit of the continental shelf', *The Juridical Review*, 1968, pp 111-146, at p 115.
[16] See also Brown (1971), *op cit* Ref 2, p 21, following note 78.
[17] Variously interpreted as the base of the continental slope or as a line including at least part of the continental rise.
[18] United Nations Charter, Article 92.
[19] In Section III, to be published in the October 1978 issue of *Marine Policy*.
[20] Anglo-French Arbitration on *Delimitation of the Continental Shelf*, Decision of Court of Arbitration of 30 June 1977 (hereafter referred to as 'Anglo-French Continental Shelf case').
[21] Decision, Para 77.

question of delimitation between neighbouring states. As regards its relevance to the question of the delimitation of the outer limit of the continental shelf, it will suffice to make two points. First, the Court was concerned in the Anglo-French case with a dispute relating to delimitation of the continental shelf between neighbouring states abutting upon a common continental shelf and not with the outer limit of the continental shelf. It had no occasion, therefore, to undertake a thorough review of the rules on the outer limit or of the relevance of the ICJ's dicta to that question. Second, even in relation to the question of delimitation between opposite or adjacent states, the Decision of the Court of Arbitration throws considerable doubt on the relevance of the natural prolongation rule.[22] It must be concluded that, strictly speaking, the Decision is irrelevant to the outer limit question. However, this is hardly likely to deter some commentators from citing the Court's approval of the natural prolongation doctrine in further support of their contention that the Geneva formula for the outer limit must now be regarded as obsolete.[23]

Declaration of Principles (1970). The Declaration of Principles governing the Sea-Bed and the Ocean Floor, and the Subsoil thereof, beyond the Limits of National Jurisdiction was adopted by the UN General Assembly on 17 December 1970 by a majority of 108 in favour, with none against and 14 abstentions.[24] Even if it could be argued that this General Assembly resolution was creative of rules of law,[25] the Declaration offers only very limited assistance on the question of the outer limit of the continental shelf. The most relevant passage is contained in the second preambular paragraph of the Declaration:

> Affirming that there is an area of the sea-bed and the ocean floor, and the subsoil thereof, beyond the limits of national jurisdiction, the precise limits of which are yet to be determined.

The most that could be drawn from this passage, however, was confirmation of the opinion, quite clearly reflected also in the proceedings in the UN before the adoption of the Declaration, that the elasticity of the criterion of exploitability in Article 1 of the Geneva Convention is not unlimited. Such a limitation would prevent the division of the entire ocean floor among the littoral states but it provides little further guidance.[26]

The Informal Composite Negotiating Text. At the Sixth Session of UNCLOS III (New York, 23 May-15 July 1977), it was decided that a new Informal Composite Negotiating Text (ICNT) should be prepared. The new Text, issued following the close of the Sixth Session,[27] is the third Negotiating Text to have been drawn up for UNCLOS III during the past three years.[28]

The relevant draft articles of the ICNT in the present context are Articles 76 and 84. Article 76, concerning 'Definition of the Continental Shelf', reads as follows:

> The continental shelf of a coastal State comprises the sea-bed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance.

[22] See further below, section on 'The *Anglo-French Continental Shelf* case (1977)'.
[23] See further the text below, around Ref 38, and Section III (to be published in *Marine Policy*, October 1978), first subsection.
[24] A/RES/2749 (XXV).
[25] See further E.D. Brown, 'The 1973 Conference on the Law of the Sea: the consequences of failure to agree', in L.M. Alexander (ed), *The Law of the Sea: A New Geneva Conference* (Proceedings of the Sixth Annual Conference of the Law of the Sea Institute, University of Rhode Island, Kingston, Rhode Island, 21-24 June 1971) 1972, pp 1-36, at pp 5-7.
[26] See further *op cit*, Ref 25, pp 7-15.
[27] A/CONF.62/WP.10 and Corr. 1 and 2, 15-20 July 1977; or in *International Legal Materials*, Vol XVI, No 5, September 1977, pp 1099-1235.
[28] The first Informal Single Negotiating Text (ISNT) was prepared in 1975 at the request of the Third Session (*Third United Nations Conference on the Law of the Sea. Official Records* [hereafter 'UNCLOS III *Off Rec*'], Vol IV, 1976, pp 137181 and Vol V, pp 111-122). It was superseded by a Revised Single Negotiating Text (RSNT) in May 1976 (UNCLOS III *Off Rec*, Vol V, p 151 *et seq*). In addition to incorporating substantive revisions, the ICNT differs from the ISNT and the RSNT in that the draft articles are renumbered in one sequence whereas the earlier version contained four separate Parts, the articles of which were separately numbered.

Thus, under this Article, the outer limit of the continental shelf will be determined by reference to either the outer edge of the continental margin or the 200-mile line, whichever lies further from the baseline of the territorial sea. The problems associated with the delimitation of the continental shelf in accordance with the 200-mile criterion are chiefly of a technical character and need not be further considered here.[29] What is essential in the present context is a thorough critique of the continental margin/natural prolongation criterion.

As was noted above, the origin of the reference in Article 76 to 'the natural prolongation of its land territory' is to be found in Paragraph 19 of the Judgment of the International Court of Justice in the *North Sea Continental Shelf* cases (1969). As I have observed elsewhere,[30] it is by no means certain that the Court intended in this passage to equate the legal continental shelf with the geological continental margin. Even if it did, it has to be remembered that the Court was concerned in these cases with a problem of lateral delimitation between adjacent states rather than the outer limit of the continental shelf. Moreover, this passage is open to considerable criticism as a purported interpretation of, *inter alia*, Article 1 of the Geneva Convention on the Continental Shelf.

However, as was foreseen,[31] commentators on the Judgment, followed by delegates to UNCLOS III, have not troubled themselves overmuch with such fine distinctions and have seized upon this notion of natural prolongation as a suitable criterion for the determination of the outer limit of the continental shelf. Although the Court made no such reference, the term has been generally considered to refer to the 'continental margin' and it is in this sense that it has been incorporated in Article 76. The question thus arises as to whether the reference to 'natural prolongation' adds anything to the definition by reference to the continental margin. Unfortunately, in the absence of a definition of the term 'continental margin', it is impossible to answer this question. 'Some physical scientists restrict the use of the term "continental margin" to the continental shelf and slope. Others include the rise, or at least that part which is continentally derived, within the margin'.[32] Clearly, Article 76 needs a more precise formulation than is provided by the reference to the continental margin. In the absence of a more precise formula, however, it is arguable that the use of the phrase 'natural prolongation of its land territory' may be read as pointing to a particular definition of the continental margin. As Dr Hodgson, the US State Department Geographer, has pointed out, 'the foot of most of the world's slope is covered with unconsolidated sediments known as the "continental rise". These sediments largely stem from the erosion of the continental block and hence can be said to be a part of the block. The seaward limit of the rise may, however, contain primarily marine sediments or a mixture of continental and marine'.[33] It would not, therefore, seem unreasonable to suppose that the 'natural prolongation' extends to include that part of the rise derived from the erosion of the continental block.

The very fact that a commentator has to indulge in such speculation simply indicates that this is a very ambiguous definition. Moreover, even if the above reasoning is correct, the international community is still left with a highly unsatisfactory definition. How precisely does one determine the seaward edge of that part of the rise which is continentally derived?

[29] See further *op cit*, Ref 2 (1977), p 379 *et seq.*

[30] Brown (1971), *op cit*, Ref 2, pp 32-35.

[31] *Ibid*, p 32.

[32] R.D. Hodgson and R.W. Smith, 'The Informal Single Negotiating Text (Committee II): A geographical perspective', *Ocean Development and International Law*, Vol 3, 1976, pp 225-259, at p 255.

[33] R.D. Hodgson, 'National maritime limits: the economic zone and the seabed', in F.T. Christy *et al* (eds), *Law of the Sea: Caracas and Beyond*, Ballinger Publishing Co, Cambridge, Mass, 1975, p 183, at p 187.

Article 84, which supplements Article 76, deals only with the question of publicizing the chosen line by reference to charts or lists of geographical coordinates and neither it nor any other article offers any guidance as to how the limit of the natural prolongation or continental margin is to be determined.

In his introduction to Part II of the Revised Single Negotiating Text (RSNT, May 1976), Chairman Aguilar said:

> On the definition of the continental shelf I was sympathetic to proposals that the outer limit of the continental margin needs to be precisely defined, particularly since the definition contained in the single negotiating text commanded significant support. However, since the proposals on such a precise limit were of a very technical nature and were in fact presented to the Committee in detail for the first time, I did not consider it appropriate to include such a definition at this stage. At the next session, a group of experts could perhaps be convened to give more exposure to this question.[34]

However, it would appear from the sparse published records of the Fifth Session (August to September 1976) and the Sixth Session (May to July 1977) that little attention has in fact been devoted to this question. Reporting on the work of Committee II's Negotiating Group 3 at the Fifth Session, Chairman Aguilar had to confess that hopes that agreement would be reached on a formula to complement the definition contained in Article 64 (the RSNT version of ICNT Article 76) had been disappointed.[35] This was hardly surprising, given the fact that 'At the final meeting of the consultative group, some delegations explained that they had taken part in the deliberations in a constructive spirit but that they were adhering to their original position that the continental shelf should not extend beyond 200 miles'.[36]

Nor does the Sixth Session appear to have progressed much further. A Negotiating Group met to consider further the definition of the outer edge of the continental margin but it would seem that further work has been postponed until the Secretariat has produced a preliminary study requested by the Second Committee of the Conference at its meeting on 29 June 1977.[37] The study will show on maps and in figures the difference in area between various approaches to the problem of defining the limit of national jurisdiction over the continental shelf.

Conclusion. As was noted above, since the UK and Denmark are parties to the Geneva Convention on the Continental Shelf but Ireland is not, it is necessary to ascertain the rules of both conventional and international customary law. As the above survey shows, that is no easy task at this transitional time in the development of these rules.

As regards conventional law, the difficulties of interpretation inherent in the text of Article 1 of the Geneva Convention have been aggravated not only by the dicta of the ICJ and the Anglo-French Court of Arbitration, but also by what appears to be a growing conviction among states – founded largely, it seems, on these dicta – that the exploitability criterion in Article 1 is now obsolete. As was recognized by the Court of Arbitration in the Anglo-French case, it is possible that 'a development in customary law may, under certain conditions, evidence the assent of the States concerned to the modification, or even termination of previously existing treaty rights and obligations'.[38] The Court went on, however, to point out that:

[34] UNCLOS III *Off Rec.* Vol V. 1976. at p 153, Para 13.
[35] A/CONF.62/L.17, 16 September 1976, Para 38.
[36] *Ibid.*
[37] UN Information Centre (London), *Round-up of Session* of Sixth Session of UNCLOS III (BR/77/30, 25 July 1977), pp 2-3.
[38] *Decision*, Para 47.

> ... the Continental Shelf Convention of 1958 entered into force as between the Parties little more than a decade ago. Moreover, the information before the Court contains references by the French Republic and the United Kingdom, as well as by other States, to the Convention as an existing treaty in force which are of quite recent date. Consequently, only the most conclusive indications of the intention of the parties to the 1958 Convention to regard it as terminated could warrant this Court in treating it as obsolete and inapplicable as between the French Republic and the United Kingdom in the present matter. In the opinion of the Court, however, neither the records of the Third United Nations Conference on the Law of the Sea nor the practice of States outside the Conference provide any such conclusive indication that the Continental Shelf Convention of 1958 is today considered by its parties to be already obsolete and no longer applicable as a treaty in force.[39]

This finding amounted to a rejection of the French argument that the Convention had been rendered obsolete by the recent evolution of customary law stimulated by the work of UNCLOS III[40] – an argument which the UK opposed in its pleadings.[41] However, to reject the proposition that the whole Convention is now obsolete is not necessarily to reject the proposition that part of the Convention – the exploitability criterion – has been rendered obsolete and this view appears to be implicit in the UK government's contention that 'under existing international law a coastal state already has sovereign rights for the exploitation of seabed resources to the edge of the continental margin'.[42] It is, of course, very difficult to determine how widely held this view is among states or to ascertain whether relevant statements relate to the present law or are made in support of proposed changes of the law.

While such doubts caution against a dogmatic assertion that Article 1 has been modified by developments in customary law, on balance this is probably now the better view. It may well be that this modification extends as far as to import into the conventional definition references to 'continental margin' and 'natural prolongation'. The fact that this development may do violence to the language of the Convention or may be based upon a questionable reading of the ICJ's Judgment in the *North Sea Continental Shelf* cases does not of course prevent it from having a law-creating effect; it merely increases the burden of proof that the generality of states, including the parties to the Convention, now share the conviction that the old definition has been replaced by the new continental margin/natural prolongation formula.

Turning to international customary law, the same continental margin/natural prolongation formula now seems to be firmly entrenched.

Delimitation between neighbouring states

As has been seen, given the geographical configuration of the Rockall sector, the opportunity for Denmark, Ireland and the UK to delimit their continental shelves in this area by reference to the above rules on the determination of the outer limit of the continental shelf is rather limited. Thus, the boundary line north of Scotland and west of Orkney and Shetland has to be constructed in accordance with the rules on the delimitation of the continental shelf between opposite states – in this case, Denmark (Faeroes) and the UK. In the south-east corner of the Rockall sector, the Republic of Ireland is both adjacent to Northern Ireland and opposite south-west Scotland; the boundary line must therefore be drawn by reference to the rules

[39] *Ibid.*
[40] *Ibid*, Para 45.
[41] *Ibid*, Para 46.
[42] Statement by Minister of State for Foreign and Commonwealth Affairs at *The Third United Nations Law of the Sea Conference. Consultations with Non-Governmental Organizations and Individuals on British Policy at the Conference, Church House, 30 January 1975*, p 1; repeated at Geneva Session of UNCLOS III on 3 April 1975.

relating to delimitation of the continental shelf of both adjacent and opposite states.[43]

Denmark and the UK both being parties to the Geneva Convention on the Continental Shelf (1958), it is by reference to Article 6 of the Convention that the delimitation of the continental shelf between them will be effected. Since the Republic of Ireland is not a party to the Geneva Convention, reference must also be made to the rules of international customary law. Moreover, since it is possible that a new Caracas Convention on the Law of the Sea will emerge from UNCLOS III before too long and that, for the parties to it, it will replace the existing Geneva Convention on the Continental Shelf (1958), it is necessary to consider briefly the latest version of the draft rules under consideration in UNCLOS III.

Until 1977, the principal *sedes materiae* for the rules on delimitation of the continental shelf between neighbouring states were Article 6 of the Geneva Convention on the Continental Shelf (1958) and the Judgment of the ICJ in the *North Sea Continental Shelf* cases (1969). Following the Decision of 30 June 1977 in the *Anglo-French Continental Shelf* case, it is now necessary, in presenting an exposition of these rules, to take into account the major reconsideration undertaken by the Court of Arbitration of those treaty rules and rules of international customary law and of the relationship between them.

The development of the rules can best be understood by considering in turn Article 6 of the Geneva Convention, the Judgment of the ICJ in the *North Sea Continental Shelf* cases and the Decision of the Court of Arbitration in the *Anglo-French* case.

The Geneva Convention. When the neighbouring states in question are parties to the Geneva Convention on the Continental Shelf (1958), Article 6 provides the rules for delimitation of the continental shelf:

> 1. Where the same continental shelf is adjacent to the territories of two or more States whose coasts are opposite each other, the boundary of the continental shelf appertaining to such States shall be determined by agreement between them. In the absence of agreement and unless another boundary line is justified by special circumstances, the boundary is the median line, every point of which is equidistant from the nearest point of the baselines from which the breadth of the territorial sea of each State is measured.
> 2. Where the same continental shelf is adjacent to the territories of two adjacent States, the boundary of the continental shelf shall be determined by agreement between them. In the absence of agreement, and unless another boundary line is justified by special circumstances, the boundary shall be determined by application of the principle of equidistance from the nearest points of the baselines from which the breadth of the territorial sea of each State is measured.
> 3. In delimiting the boundaries of the continental shelf, any lines which are drawn in accordance with the principles set out in paragraphs 1 and 2 of this Article should be defined with reference to charts and geographical features as they exist at a particular date, and reference should be made to fixed permanent identifiable points on the land.

It is of course to be hoped that the parties will reach agreement on a boundary line. If such hopes are disappointed, however, the boundary line has to be determined, in the absence of special circumstances, by application of the principle of equidistance from the nearest points of the baseline of the territorial sea of each state. The first question which will have to be asked, therefore, is whether there are any

[43] See below for discussion of dicta of Court of Arbitration in *Anglo-French Continental Shelf* case (1977) relating to neighbouring states which are both opposite and adjacent to each other.

'special circumstances' which would justify departure from an equidistant line.

The meaning of the term 'special circumstances' has been considered by the writer elsewhere,[44] and it is clear from the record that exceptional geographical circumstances constitute the main category of 'special circumstances'. The object is to make allowance for 'departures necessitated by any exceptional configuration of the coast'.[45] The most frequent cause of such an exceptional configuration is the presence of islands on the continental shelf. Another example is the existence of extensive sedimentary mud flats which may make the determination of the low-water line difficult and thus justify the use of the high-water mark as the territorial sea baseline. More generally, the most reasonable interpretation of the scope of 'special circumstances' in relation to exceptional geographical configuration would seem to be that advanced in the pleadings in the *North Sea Continental Shelf* cases (1969)[46] on behalf of the Danish and Netherlands Governments and summed up in the following passages:

> the legal concept of special circumstances has found expression in the Convention in the form that special circumstances are to be taken into account only when they *justify* another boundary line. If Article 6 is applied as a rule of law this must necessarily mean that the correction of the equidistance principle which the clause clearly intends, can take place *only if deviation from the equidistance line is justified towards both States – ie the State which 'gains' and the State which 'loses' by the correction* ... It seems thus legitimate to interpret the 'special circumstances' clause *to the effect that it can be invoked against a State whose Continental Shelf* boundary under the equidistance principle reflects projecting geographical features (primarily certain islands and peninsulas) whereas it cannot be applied against a State whose Continental Shelf has a solid geographical connection with the territory of that State thereby constituting a natural continuation of the territory of the State in conformity with the general geographical situation.[47]

North Sea Continental Shelf cases, 1969. The ICJ had occasion to consider the rules of international customary law governing the delimitation of the continental shelf between neighbouring states when the following question was put to it by the parties in these cases:

> What principles and rules of international law are applicable to the delimitation as between the Parties of the areas of the continental shelf in the North Sea which appertain to each of them beyond the partial [boundaries determined by previous agreement]?[48]

The Court, by eleven votes to six, found that the use of the equidistance method of delimitation was not obligatory as between the parties and laid down two 'principles and rules':

> (1) delimitation is to be effected by agreement in accordance with equitable principles, and taking account of all the relevant circumstances, in such a way as to leave as much as possible to each Party all those parts of the continental shelf that constitute a natural prolongation of its land territory into and under the sea, without encroachment on the natural prolongation of the land territory of the other;
> (2) if, in the application of the preceding sub-paragraph, the delimitation leaves to the parties areas that overlap, these are to be divided between them in agreed proportions or failing agreement, equally, unless they decide on a regime of joint jurisdiction, user, or exploitation for the zones of overlap or any part of them.

The Court went on to specify that the 'factors' to be taken into account in the course of the negotiations should include:

[44] Brown (1971), *op cit*, Ref 2, pp 62-70.
[45] See *ibid*, p 63.
[46] *ICJ Reports 1969*, p 3.
[47] *Common Rejoinder, ICJ Pleadings, North Sea Continental Shelf* (hereafter '*Pleadings*'), Vol I, pp 526-527.
[48] *ICJ Reports 1969*, p 3, at p 6.

(1) the general configuration of the coasts of the Parties, as well as the presence of any special or unusual features;
(2) so far as known or readily ascertainable, the physical and geological structure, and natural resources, of the continental shelf area involved;
(3) the element of a reasonable degree of proportionality, which a delimitation carried out in accordance with equitable principles ought to bring about between the extent of the continental shelf areas appertaining to the coastal State and the length of its coastline, account being taken for this purpose of the effects, actual or prospective, of any other continental shelf delimitations between adjacent States in the same region.[49]

For reasons which have been fully explained elsewhere,[50] I am unable to accept these findings as a correct statement of international customary law as it stood in 1969. It is my opinion, rather, that the rules expressed in Article 6(2) of the Geneva Convention on the Continental Shelf had attained the status of international customary law. If this view is correct, then, of course, the boundary line would be drawn as described in the above analysis of Article 6 of the Geneva Convention. Whatever view is taken of the Court's Judgment, however, it has to be acknowledged that it carries very considerable weight simply because it represents the considered opinion of the principal judicial organ of the United Nations. Moreover, the respect generally accorded to the ICJ judgments and the tendency for states to cite and act in accordance with them, gradually, over the years, strengthens their authority as correct statements of the law. It is, therefore, necessary to consider where the boundary would lie as a result of the application of the law as stated by the Court.[51]

In the view of the ICJ, the Truman Proclamation (1945) – whereby the USA proclaimed exclusive jurisdiction and control over the continental shelf contiguous to its territory – has a special status, having come to be regarded as the starting point of the positive law on the continental shelf;[52] it 'must be considered as having propounded the rules of law in this field':[53]

> With regard to the delimitation of lateral boundaries between continental shelves of adjacent States ... the Truman Proclamation stated that such boundaries 'shall be determined by the United States and the State concerned in accordance with equitable principles'. These two concepts, of delimitation by mutual agreement and delimitation in accordance with equitable principles, have underlain all the subsequent history of the subject. They were reflected in various other State proclamations of the period, and after, and in the later work on the subject.[54]

It had also been argued in the Truman Proclamation that '... the continental shelf may be regarded as an extension of the land-mass of the coastal nation and thus naturally appurtenant to it'. The Court described as the 'chief doctrine' enunciated by the Proclamation the proposition that the coastal state has 'an original, natural and exclusive (in short a vested) right to the continental shelf off its shores'.[55]

In other passages the Court referred to this same notion at greater length:

> What confers the *ipso jure* title which international law attributes to the coastal State in respect of its continental shelf, is the fact that the submarine areas concerned may be deemed to be actually part of the territory over which the coastal State already has dominion – in the sense that, although covered with water, they are a prolongation or continuation of that territory, an extension of it, under the sea. From this it would follow that whenever a given submarine area does not constitute a natural – or the most natural – extension of the land territory of a coastal State,

[49] *Ibid*, pp 53-54.
[50] Brown (1971), *op cit*, Ref 2, Chapter 2.
[51] The consequent advisability of examining this Judgment closely is further strengthened by the extent to which it was referred to in the Decision of the Court of Arbitration in the *Anglo-French Continental Shelf* case.
[52] *ICJ Reports 1969*, p 3, at pp 32-33.
[53] *Ibid*, p 47.
[54] *Ibid*, p 33, Para 47.
[55] *Ibid*.

even though that area may be closer to it than it is to the territory of any other State, it cannot be regarded as appertaining to that State – or at least it cannot be so regarded in the face of a competing claim by a State of whose land territory the submarine area concerned is to be regarded as a natural extension, even if it is less close to it.[56]

And again, the Court described as 'the most fundamental of all the rules relating to the continental shelf', the rule that:

the rights of the coastal State in respect of the area of continental shelf that constitutes a natural prolongation of its land territory into and under the sea exist *ipso facto* and *ab initio*, by virtue of its sovereignty over the land, and as an extension of it in an exercise of sovereign rights for the purpose of exploring the sea-bed and exploiting its natural resources.[57]

The Court drew from this fundamental rule the conclusion that, in accordance with 'the basic concept of continental shelf entitlement', the process of delimitation was essentially one of drawing a boundary line between areas which already appertained to one or other of the states affected. The delimitation had to be equitably effected but could not have as its object the awarding of an equitable share or indeed of a share, as such, at all, for the fundamental concept involved did not admit of there being anything undivided to share out.[58]

The Court was quite specific as to the meaning of equity in this context:

It is not a question of applying equity simply as a matter of abstract justice, but of applying a rule of law which itself requires the application of equitable principles, in accordance with the ideas which have always underlain the development of the legal regime of the continental shelf in this field, namely:

(a) an obligation to enter into meaningful negotiations with a view to arriving at an agreement;
(b) an obligation to act in such a way that taking all the circumstances into account, equitable principles are applied – for this purpose the equidistance method can be used, but other methods exist and may be employed alone or in combination;
(c) the continental shelf of any State must be the natural prolongation of its land territory and must not encroach upon what is the natural prolongation of the territory of another State.[59]

The Court considered that, in certain geographical circumstances, the application of the equidistance method would unquestionably lead to inequity. For example, it felt that if the equidistance method were applied to a concave coastline, 'then the greater the irregularity and the further from the coastline the area to be delimited, the more unreasonable [would be] the results produced'. In the Court's view, 'So great an exaggeration of the consequences of a natural geographical feature must be remedied or compensated for as far as possible, being of itself creative of inequity'.[60]

At the same time, the Court emphasized that equity does not necessarily imply equality.[61]

Equality is to be reckoned within the same plane ... Here indeed is a case where, in a theoretical situation of equality within the same order, an inequity is created. What is unacceptable in this instance is that a State should enjoy continental shelf rights considerably different from those of its neighbours merely because in the one case the coastline is roughly convex in form and in the other it is markedly concave, although those coastlines are comparable in length. It is therefore not a question of totally refashioning geography whatever the facts of the situation but, given a geographical situation of quasi-equality as between a number of States, of abating

[56] *Ibid*, p 31, Para 43.
[57] *Ibid*, p 22, Para 19.
[58] *Ibid*. Para 20.
[59] *Ibid*, p 47, emphasis added.
[60] *Ibid*, p 49, Para 89.
[61] *Ibid*. Para 91.

the effects of an incidental special feature from which an unjustifiable difference of treatment could result.[62]

Finally, the Court explained that there is no legal limit to the considerations which states may take into account to ensure the application of equitable principles. Various features have to be put into the balance:

- *Geological factor.* Thus, 'it can be useful to consider the geology of the shelf in order to find out whether the direction taken by certain configurational features should influence delimitation because, in certain localities, they point-up the whole notion of the appurtenance of the continental shelf to the State whose territory it does in fact prolong'.[63]
- *Geographical factor.* Again, 'It is ... necessary to examine closely the geographical configuration of the coastlines of the countries whose continental shelves are to be delimited. This is one of the reasons why the Court does not consider that markedly pronounced configurations can be ignored; for, since the land is the legal source of the power which a State may exercise over territorial extensions to seaward, it must first be clearly established what features do in fact constitute such extensions.'[64]
- *Unity of deposits.* The Court did not regard preservation of unity of deposits as a major factor but merely 'a factual element which it is reasonable to take into consideration in the course of the negotiations'.[65]
- *The proportionality factor.* Finally, the Court held that account is to be taken of 'the element of a reasonable degree of proportionality which a delimitation effected according to equidistance principles ought to bring about between the extent of the continental shelf appertaining to the States concerned and the length of their respective coastlines – these being measured according to their general direction[66] in order to establish the necessary balance between States with straight and those with markedly concave or convex coasts or to reduce very irregular coastlines to their truer proportions'.[67]
- *Overlapping natural prolongations.* The Court foresaw that application of equitable principles in accordance with the above factors might lead to an overlapping of the areas appertaining to the states concerned. It accordingly provided that such a situation must be dealt with by an agreed or, failing that, an equal division or, alternatively, by agreement for joint exploitation of the overlapping areas.[68]

Given that the Court actually stated that 'In fact, there is no legal limit to the considerations which States may take account of for the purpose of making sure that they apply equitable procedures',[69] it was only to be expected that, in future disputes, many quite extraneous factors would be pressed into service by those who felt that they had something to gain from a departure from the principle of equidistance. It will be argued below that this is what happened in the *Anglo-French* case. It was precisely because of the vagueness of the Court's references to equity that I considered it necessary, in an earlier work,[70] to stress the undesirability of relying on the notion of equity as a criterion of delimitation. As was there argued, the concept of special circumstances, though it could scarcely be claimed to be precise in its

[62] *Ibid*, p 50, Para 91.
[63] *Ibid*, p 51, Para 95.
[64] *Ibid*, Para 96.
[65] *Ibid*, p 52, Para 97.
[66] Cf the German argument for the application of the sector principle to the case of the North Sea (German *Memorial, Pleadings*, Vol I, p 83 *et seq*) and Professor Oda's exposition of the 'coastal facade' theory in the Oral Proceedings (*Pleadings*, Vol II, p 62 *et seq*).
[67] *ICJ Reports 1969*, p 52, Para 98.
[68] *Ibid*, Para 99.
[69] *Ibid*, p 50, Para 93.
[70] Brown (1971), *op cit*, Ref 2, p 62.

meaning, was at least much more limited in scope and less open to arbitrary concretization than the general principle of equity as interpreted by the Court.

Even accepting the Court's dictum, however, it should be added that the reference to there being no legal limit to the considerations which states may take into account may not properly be taken too literally because, as can be seen in the above-quoted passage, it is circumscribed immediately by reference to geological and geographical factors and to the idea of unity of deposits. As the Court said, 'These criteria, though not entirely precise, can provide adequate bases for decision adapted to the factual situation'.[71]

The Anglo-French Continental Shelf case (1977). The Court of Arbitration, in its Decision in this case, refers extensively both to the provisions of Article 6 of the Geneva Convention and to the rules of international customary law as interpreted by the ICJ in the *North Sea Continental Shelf* cases. It is beyond the scope of this article[72] to analyse the Decision in detail but brief reference must be made to the Court of Arbitration's views on the natural prolongation rule, channels or depressions in the continental shelf, and 'special circumstances' and 'equitable principles'.

With regard to *the natural prolongation rule*, a close scrutiny of the Court's reasoning concerning the delimitation of the continental shelf in the Channel Islands sector of the arbitration area suggests that the Court pays little more than lip service to the ICJ's 'fundamental' natural prolongation rule. Thus, on the one hand, the Court spoke of the rule 'that the continental shelf of any State must be the natural prolongation of its land territory and must not encroach upon what is the natural prolongation of the territory of another State'[73] as 'being of general application' and went on to say that 'This conclusion follows directly from the fundamental rule itself and is, indeed, merely an application of that rule to the context of a single area of continental shelf upon which the territories of two or more States abut'.[74]

So far, then, the Court of Arbitration seems to be at one with the ICJ. In the immediately following sentence, however, there is a strong hint that the Court of Arbitration takes a very different view from that of the ICJ on the relevance of the concept of natural prolongation to lateral delimitation; and this hint becomes a certainty in later passages of the Decision. The Court went on from the above passage to say,

> So far as delimitation is concerned, however, this conclusion states the problem rather than solves it. The problem of delimitation arises precisely because in situations where the territories of two or more States abut on a single continuous area of continental shelf, it may be said geographically to constitute a natural prolongation of the territory of each of the States concerned. Consequently, it is rather in the rules of customary law discussed in the *North Sea Continental Shelf* cases and which are specifically directed to delimitation that guidance may be sought regarding the principles to be applied in determining the boundary of the continental shelf in such situations.[75]

This would seem to be tantamount to saying that the concept of natural prolongation is really irrelevant to the problem of lateral delimitation. Indeed, if one asks what difference it would have made if the Court had not mentioned the natural prolongation rule, the answer must be that it would have made none whatsoever. This part

[71] *ICJ Reports 1969*, p 51.
[72] See further E.D. Brown, 'The Anglo-French Continental Shelf Case', *Year Book of World Affairs*, Vol 33, 1979, and his *Sea-Bed Energy and Mineral Resources and the Law of the Sea*, Graham and Trotman, London, in preparation.
[73] *Decision*, Para 79.
[74] *Ibid.*
[75] *Ibid.*

of the Court's Decision is clearly based not upon the natural prolongation rule but upon the Court's judgment that the geographical situation of the Channel Islands close to the French mainland constituted a circumstance creative of inequity and a 'special circumstance' within the meaning of Article 6 of the Geneva Convention. This being so, this arbitral award can hardly be considered to have confirmed the view that the concept of natural prolongation is relevant for the delimitation of lateral boundaries.

The Court also dealt with *channels or depressions in the continental shelf*. I have expressed the view that the concept of natural prolongation belongs to the problem of the seaward extension of the continental shelf, not to its delimitation as between opposite or adjacent states. It is perhaps necessary to qualify this view by saying that it holds good only so long as it may be assumed that the neighbouring states abut upon one continuous continental shelf. Thus, if there is 'a major and persistent structural discontinuity of the seabed and subsoil of such a kind as to interrupt the essential geological continuity of the continental shelf',[76] then, in a sense, the concept of natural prolongation would be relevant to the question of delimitation. It would, however, be more accurate in such cases to describe the situation in terms of two separate continental shelves. This is the case, for example, with the Timor Trench boundary between Australia and Indonesia, the 2500-3000 metre deep Trench marking the northern limit of the Australian continental margin.[77]

The Timor Trench situation is, of course, one between opposite states. While theoretically possible, it would be extremely unusual to find such a major geological discontinuity extending laterally across the shelf in the vicinity of the land boundary of adjacent states. It is quite normal to find relatively superficial or secondary depressions or channels running across a continuous continental margin – often originating in an ancient fluvio-glacial drainage system – but such features are not major geological discontinuities.

The Court of Arbitration had occasion to deal with such a secondary feature in the *Anglo-French* case when considering the UK's alternative submission that the continental shelf boundary should follow the Hurd Deep-Hurd Deep Fault Zone, if the Court should decide that those geological faults were such as to 'interrupt the essential geological continuity of the continental shelf'.[78]

The Hurd Deep is situated near the centre of the English Channel just off the Channel Islands. The fault or series of faults extends for a distance of some 80 nautical miles, with a width of between 1 and 3 nautical miles and a depth of over 100 metres.[79]

The parties were at one in considering that the faults did not detract from the geological continuity of the continental shelf, though the UK, in its alternative submission, did consider that the Hurd Deep Fault Zone constituted a major and persistent rift in the structure of the shelf.[80] The Court of Arbitration did not agree:

> 107. Whichever way the matter is put, the Court does not consider that the Hurd Deep-Hurd Deep Fault Zone is a geographical feature capable of exercising a material influence on the determination of the boundary either in the Atlantic region or in the English Channel. The Court shares the view repeatedly expressed by both Parties that the continental shelf throughout the arbitration area is characterised by its essential geological continuity. The geological faults which constitute the Hurd Deep and the so-called Hurd Deep Fault Zone, even if they be considered as distinct features in the geomorphology of the shelf, are still discontinuities in the

[76] *Ibid*, Para 104.
[77] The boundary laid down in the Agreements of 18 May 1971 and 9 October 1972 is a compromise, approximately midway between the line of the Trench advocated by Australia and the median line claimed by Indonesia. For texts, see R. Churchill *et al*, *New Directions in the Law of the Sea*, Oceana, New York, Vol IV, 1975, p 91 *et seq*.
[78] *Ibid*, Para 106.
[79] *Decision*, Para 9.
[80] *Ibid*, Para 12.

seabed and subsoil which do not disrupt the essential unity of the continental shelf either in the Channel or the Atlantic region. Indeed, in comparison with the deep Norwegian Trough in the North Sea, they can only be regarded as minor faults in the geological structure of the shelf; and yet the United Kingdom agreed that the trough should not constitute an obstacle to the extension of Norway's continental shelf boundary beyond that major fault zone. Moreover, to attach critical significance to a physical feature like the Hurd Deep-Hurd Deep Fault Zone in delimiting the continental shelf boundary in the present case would run counter to the whole tendency of State practice on the continental shelf in recent years.[81]

The Court went on in a later passage[82] to say that even if it were to find that the equidistance line was not the appropriate boundary, it would be because some geographical feature amounted to a 'special circumstance' justifying another boundary under Article 6 or, by rendering the equidistance line inequitable, called under customary law for the use of some other method. It proceeded then to say that

the axis of the Hurd Deep-Hurd Deep Fault Zone is placed where it is simply as a fact of nature, and there is no intrinsic reason why a boundary along that axis should be the boundary which is justified by the special circumstances under Article 6 or which, under customary law, is needed to remedy the particular inequity.[83]

It is, of course, true that the Hurd Deep is a very minor depression in the shelf. Nevertheless, the references which the Court made to (i) the Norwegian Trough, (ii) the absence of any disruption of the essential unity of the continental shelf and (iii) 'the whole tendency of State practice ... in recent years' strongly suggest that its reasoning would also apply to other channels or depressions which could not be regarded as major geological discontinuities.

With regard to '*special circumstances*' and '*equitable principles*', the many dicta of the Court dealing with these concepts deserve full analysis but limitations of space forbid more than a summary of some of the more important of the Court's pronouncements.

The first of these concerns the relationship between Article 6 and international customary law. The Court went a considerable way towards identifying 'special circumstances' in the meaning of Article 6 with the equitable factors referred to by the ICJ in the *North Sea* cases. It was pointed out that

The double basis on which both Parties put their case regarding the Channel Islands confirms the Court's conclusion that the different ways in which the requirements of 'equitable principles' or the effects of 'special circumstances' are put reflect differences of approach and terminology rather than of substance.[84]

This may be an acceptable statement in the circumstances of this case. If intended to be of general validity, however, it goes too far. There are grounds for believing that the Court did intend it to be of general application. Thus, not only did it regard the rules of international customary law as 'essential means both for interpreting and completing the provisions of Article 6';[85] it also referred, in connection with the special circumstances rule, to considerations which would not seem to fall within the scope of this concept. Thus, among the 'relevant circumstances' invoked by the UK and accepted by the Court 'as carrying a certain weight' were the following: the particular character of the Channel Islands as populous islands of a certain political and economic importance; the close ties between the islands and the UK; the latter's responsibility for their defence and security; and the impossibility of the islands having any appreciable

[81] *Ibid*, Para 107.
[82] *Ibid*, Para 108.
[83] *Ibid*.
[84] *Ibid*, Para 148.
[85] *Ibid*, Para 75.

area of continental shelf except in the open waters to their west and north.[86]

While it is true that these circumstances were allowed to have only a very minor effect on the boundary line in this case, the Court's reasoning does indicate just how wide it considered the category of factors relevant to special circumstances to be. Professor Briggs was right to express his concern – in his separate declaration – that the Court's interpretation of Article 6 'constitutes some threat that the rule of positive law expressed in Article 6 will be eroded by its identification with subjective equitable principles, permitting attempts by the Court to redress the inequities of geography'.[87]

Another important pronouncement relates to the burden of proof of special circumstances. The UK had argued that Article 6(1) placed an onus of proof upon France to show the existence of any special circumstances on which it relied and to show that these circumstances justified a boundary other than the median line as defined by that paragraph.[88] The Court of Arbitration considered, however, that this view did not place the equidistance principle in its true perspective and went on as follows:

> Article 6, as both the United Kingdom and the French Republic stress in the pleadings, does not formulate the equidistance principle and 'special circumstances' as two separate rules. The rule there stated in each of the two cases is a single one, a combined equidistance-special circumstances rule. This being so, it may be doubted whether, strictly speaking, there is any legal burden of proof in regard to the existence of special circumstances. The fact that the rule is a single rule means that the question whether 'another boundary is justified by special circumstances' is an integral part of the rule providing for application of the equidistance principle. As such, although involving matters of fact, that question is always one of law of which, in case of submission to arbitration, the tribunal must itself, *proprio motu*, take cognisance when applying Article 6.[89]

It is believed that the Court of Arbitration's view on the legal burden of proof is not in accordance with the intention of the parties to the Geneva Convention. Like Professor Briggs, I find that the

> ... Court's interpretation of Article 6 seems, in effect, to shift 'the burden of proof' of 'special circumstances' from the State which invokes them to the Court itself, and constitutes some threat that the rule of positive law expressed in Article 6 will be eroded by its identification with subjective equitable principles, permitting attempts by the Court to redress the inequities of geography.[90]

Turning to the proportionality factor, as has been seen, the ICJ held, in its Judgment in the *North Sea* cases, that, to ensure the application of equitable principles to the delimitation of the continental shelf, account had to be taken of 'the element of a reasonable degree of proportionality which a delimitation effected according to equidistance principles ought to bring about between the extent of the continental shelf appertaining to the States concerned and the length of their respective coastlines ...'[91] This dictum is open to considerable criticism and it is fortunate that it has now been reconsidered by the Court of Arbitration. What has survived the Court's reexamination is simply the unexceptionable proposition that the broad notion of proportionality is one which may be called in aid to help in establishing whether a particular feature does constitute special circumstances because of its unjust distorting effects.

The Court also reconsidered the distinction between opposite-states and adjacent-states situations. Unlike Article 12 of the Geneva

[86] *Ibid*, Para 197.
[87] *Ibid*, p 236.
[88] *Ibid*, Para 67.
[89] *Ibid*, Para 68.
[90] *Ibid*, p 236.
[91] *ICJ Reports 1969*, Para 98.

Convention on the Territorial Sea, Article 6 of the Geneva Convention on the Continental Shelf deals with opposite-states and adjacent-states situations in separate paragraphs. To the ICJ, the reason for this was plain. In an opposite-states situation, 'ignoring the presence of islets, rocks and minor coastal projections, the disproportionally distorting effect of which can be eliminated by other means',[92] a median line 'must effect an equal division of'[93] the continental shelf areas concerned. In the case of 'laterally adjacent States on the same coast with no immediately opposite coast in front of it',[94] however, 'in certain geographical circumstances ... the equidistance method ... leads unquestionably to inequity ... Thus, it has been seen that in the case of concave or convex coastlines that if the equidistance method is employed, then the greater the irregularity and the further from the coastline the area to be delimited, the more unreasonable are the results produced'.[95] Obviously, such distortions are comparatively small within the narrow limits of the territorial sea[96] – hence the difference between the delimitation rules in the two Conventions.

The ICJ's somewhat rigid differentiation between the two types of situation was again apparent in its finding – admittedly *obiter* – that Article 6 could not apply to a delimitation between Denmark and the Netherlands since they were neither 'adjacent' nor 'opposite' to each other.[97]

The Court of Arbitration, in its review of this question, has adopted a much broader approach to the interpretation of Article 6 which seems to this writer to be much more in accordance with the intention of the parties to the Geneva Convention.

The Court divided the 'arbitration area' into an 'English Channel region' and an 'Atlantic region'.

In relation to the English Channel region, the Court agreed with the view of the parties that it had to deal with an opposite-states situation and that the appropriate method of delimitation was, in principle, that of equidistance.[98]

With regard to the Atlantic region, the parties were not at all in agreement. France argued that, since the UK and France were separated by the Channel, the Atlantic region could not be considered to be an adjacent-states situation; and, since the Atlantic region lay *off* the two coasts rather than *between* them, it was not an opposite-states situation. It concluded that it was a situation *sui generis* and a *casus omissus* falling completely outside Article 6 of the Geneva Convention.[99] The UK, on the other hand, contended that Article 6 was intended to deal comprehensively with the delimitation of the continental shelf and there could be no question of *casus omissus*. Moreover, even though the Atlantic region lay off the coast of the two countries, it was still essentially an opposite-states situation.[100]

The Court endorsed the UK's view that Article 6 was to be regarded as comprehensive and that all situations must, therefore, in principle, fall under either Paragraph 1 or Paragraph 2 of that Article.[101] It next went on to interpret the passage in the Judgment in the *North Sea Continental Shelf* cases, in which the ICJ had noted that:

> In certain geographical configurations of which the Parties furnished examples, a given equidistance line may partake in varying degree of the nature both of a median and of a lateral line.[102]

What this meant, the Court of Arbitration held, was that 'in

[92] *Ibid*, Para 57.
[93] *Ibid*.
[94] *Ibid*.
[95] *Ibid*, Para 89.
[96] *Ibid*, Para 59.
[97] *Ibid*, Para 36.
[98] *Decision*, Para 87.
[99] *Ibid*, Paras 89-90.
[100] *Ibid*, Paras 91-93.
[101] *Ibid*, Para 94.
[102] *ICJ Reports 1969*, p 17.

determining whether two States are to be considered as "opposite" or "adjacent", for the purpose of delimiting a continental shelf on which each of them abuts, the Court must have regard to their actual geographical relation to each other and to the continental shelf at any given place along the boundary'.[103]

The Court of Arbitration cited two further passages from the Judgment in the *North Sea* cases, where, as was noted above, the ICJ had said that

> whereas a median line divides equally between the two opposite countries areas that can be regarded as being the natural prolongation of the territory of each of them, a lateral equidistance line often leaves to one of the States concerned areas that are a natural prolongation of the territory of the other.[104]

and had pointed out that

> if the equidistance method is employed, then the greater the irregularity and the further from the coastline the area to be delimited, the more unreasonable are the results produced. So great an exaggeration of the consequences of a natural geographical feature must be remedied or compensated for as far as possible, being of itself creative of inequity.[105]

Commenting on these passages, the Court of Arbitration said that

> It is also clear that the distinction drawn by the Court between the two geographical situations is one derived not from any legal theory but from the very substance of the difference between the two situations. Whereas in the case of 'opposite' States a median line will normally effect a broadly equitable delimitation, a lateral equidistance line extending outward from the coasts of adjacent States for long distances may not infrequently result in an inequitable delimitation by reason of the distorting effect of individual geographical features. In short, it is the combined effect of the side-by-side relationship of the two States and the prolongation of the lateral boundary for great distances to seawards which may be productive of inequity and is the essence of the distinction between 'adjacent' and 'opposite' coasts situations.[106]

Reverting to this point in a later passage, the Court of Arbitration was of the view that 'the precise system of toponomy adopted for these various areas is without any legal relevance in the present proceedings; it is the physical facts of geography, not nomenclature, with which this Court is concerned'.[107] The Court developed this thinking at greater length in Paragraphs 239-240 of its Decision:

> 239. As this Court of Arbitration has already pointed out in paragraphs 81-94, the appropriateness of the equidistance or any other method for the purpose of effecting an equitable delimitation in any given case is always a function or reflection of the geographical and other relevant circumstances of the particular case. In a situation where the coasts of the two States are opposite each other, the median line will normally effect a broadly equal and equitable delimitation. But this is simply because of the geometrical effects of applying the equidistance principle to an area of continental shelf which, in fact, lies between coasts that, in fact, face each other across that continental shelf. In short, the equitable character of the delimitation results not from the legal designation of the situation as one of 'opposite' States *but from its actual geographical character as such.* Similarly, in the case of 'adjacent' States, it is the lateral geographical relation of the two coasts when combined with a large extension of the continental shelf seawards from those coasts, which makes individual geographical features on either coast more prone to render the geometrical effects of applying the equidistance principle inequitable than in the case of 'opposite' States. The greater risk in these cases that the equidistance method may produce an inequitable delimitation thus also results not from the *legal*

[103] *Decision*, Para 94.
[104] *ICJ Reports 1969*, Para 58.
[105] *Ibid*, at Para 89(a).
[106] *Decision*, Para 95.
[107] *Ibid*, Para 204.

designation of the situation as one of 'adjacent' States but *from its actual geographical character as one involving laterally related coasts.*

240. What is, moreover, evident is that the relevance of the distinction between opposite and adjacent coasts is in regard to the operation of the 'special circumstances' element in the 'equidistance-special circumstances' rule laid down in Article 6 for both situations. What is also evident in the view of the Court, is that the answer to the question whether the effect of individual geographical features is to render an equidistance delimitation 'unjustified' or 'inequitable' cannot depend on whether the case is *legally* to be considered a delimitation between 'opposite' or between 'adjacent' States. The appreciation of the effect of individual geographical features on the course of an equidistance line has necessarily to be made by reference to the actual geographical conditions of the particular area of continental shelf to be delimited and to the actual relation of the two coasts to that particular area.

The Court was 'inclined to the opinion'[108] that the Atlantic region was an opposite-states rather than an adjacent-states situation. More important, however, was its view that:

> to fix the precise legal classification of the Atlantic region appears to this Court to be of little importance. The rules of delimitation prescribed in paragraph 1 and paragraph 2 are the same, and it is the actual geographical relation of the coasts of the two States which determine their application. What is important is that, in appreciating the appropriateness of the equidistance method as a means of effecting a 'just' or 'equitable' delimitation in the Atlantic region, the Court must have regard both to the lateral relation of the two coasts as they abut upon the continental shelf of the region and to the great distance seawards that this shelf extends from those coasts.[109]

Finally, brief mention must be made of the question of coastal archipelagos. The Court's treatment of the Scilly Isles offers an instructive example of an archipelago[110] on the 'right' side of the median line[111] constituting special circumstances.

As the Court indicated, 'The effect of the presence of the Scilly Isles west-south-west of Cornwall is to deflect the equidistance line on a considerably more south-westerly course than would be the case if it were to be delimited from the baselines of the English mainland. The difference in the angle is 16°36′14″; and the extent of the additional area of shelf accruing to the UK, and correspondingly not accruing to the French Republic, in the Atlantic region eastwards of the 1000 metre isobath is approximately 4000 square miles'.[112]

The Court did of course acknowledge that this fact of nature did not in itself justify a departure from an equidistance line drawn by reference to the Scillies. The question was rather to decide whether 'in the light of all the pertinent geographical circumstances, that fact amounts to an inequitable distortion of the equidistance line producing disproportionate effects on the areas of shelf accruing to the two States'.[113]

The Court decided that it did. In its view, 'the further projection westwards of the Scilly Isles, when superadded to the greater projection of the Cornish mainland westwards beyond Finistère, is of much the same nature for present purposes, and has much the same tendency to distortion of the equidistance line, as the projection of an exceptionally long promontory, which is generally recognized to be one of the potential forms of 'special circumstances'.[114] The Court accordingly provided for an appropriate abatement of the disproportionate effects of this 'considerable projection onto the Atlantic continental shelf of a somewhat attenuated portion of the

[108] *Ibid*, Para 242.
[109] *Ibid.*
[110] The Scillies group consists of 48 islands, 6 of which are inhabited, with a total population (in 1971) of 2428 (*Decision*, Para 4).
[111] The Channel Islands, on the other hand, form an archipelago on the 'wrong' side of the median line, that is, they are under the sovereignty of the UK but are situated nearer to France.
[112] *Decision*, Para 243.
[113] *Ibid.*
[114] *Ibid*, Para 244.

coast of the United Kingdom'.[115]

The rules emerging from UNCLOS III. The ICJ's Judgment in the *North Sea Continental Shelf* cases referred only to the rules of international customary law on delimitation between neighbouring states. It has also proved to be highly influential, however, in UNCLOS III and has clearly affected the drafting of Article 83, 'Delimitation of the continental shelf between adjacent or opposite States', of the Informal Composite Negotiating Text (ICNT).[116] This new formula reads as follows:

> 1. The delimitation of the continental shelf between adjacent or opposite States shall be effected by agreement in accordance with equitable principles, employing, where appropriate, the median or equidistance line, and taking account of all the relevant circumstances.
> 2. If no agreement can be reached within a reasonable period of time, the States concerned shall resort to the procedure provided for in Part XV.
> 3. Pending agreement or settlement, the States concerned shall make provisional arrangements, taking into account the provisions of paragraph 1.
> 4. Where there is an agreement in force between the States concerned, questions relating to the delimitation of the continental shelf shall be determined in accordance with the provisions of that agreement.

In my view, fully explained elsewhere,[117] the draftsman of Article 83(1) has succeeded only in replacing the relatively clear, workable formula of Article 6 of the Geneva Convention with one based upon a half-baked adaptation of the Court's statement of the rules and principles of international customary law. The vagueness of the new formula is aggravated by the lack of suitable means for the compulsory settlement of disputes; and, without any justification having been given, it discards the useful concept of special circumstances and downgrades the role of the equidistance principle.

In interpreting Article 83(1), there is a temptation to say that, since it clearly represents an attempt to incorporate in the Convention the rules and principles expounded by the ICJ, liberal reference may legitimately be made to the Court's Judgment to determine its meaning. It must be said, however, that the economy of language with which Article 83(1) is formulated borders on vagueness and it is only by a very questionable reference back to the Court's Judgment that the meaning and scope of the terms 'equitable principles' and 'all the relevant circumstances' can be determined. If parties to a new Convention were to take the view, as well they might, that it was hardly legitimate to interpret vague terms in a convention by reference to an earlier judgment given on the basis of international customary law, the way would be open to a very broad interpretation of 'equity' and 'all the relevant circumstances'. Somewhat paradoxically, there would thus be a greater risk under the new Convention than that which exists under international customary law that parties in dispute would attempt to include among 'all the relevant circumstances' factors which are quite extraneous to the question of the boundaries of the continental shelf.

What effect the Decision in the *Anglo-French* case will have on the UNCLOS proceedings remains to be seen. It does, however, seem unlikely that the Decision will be regarded as requiring any change in draft Article 83. The homogenization of Article 6 and the rules of international customary law which the Court of Arbitration seemed to favour produces a formula not unlike that in Article 83(1).

[115] *Ibid*, Para 249.
[116] *Op cit*, Ref 27.
[117] Brown (1977), *op cit*, Ref 2, pp 395-400.

The continental shelf of islands and rocks

The Rockall sector is plentifully strewn with islands and rocks of all shapes, sizes and locations relative to the mainland, and it is therefore important to examine the rules governing the delimitation of the continental shelf around such features. Like many other parts of the law of the sea, the law on this question is presently in a state of flux, a radically new regime having been proposed in the draft articles of the ICNT. It is necessary, therefore, not only to consider the relevant rules of the Geneva Convention of 1958 and the corresponding rules of international customary law as they developed before UNCLOS III, but also to examine the provisions of the ICNT. Such an examination has two objects: to clarify the law as it would be if the provisions of the ICNT were to become binding on the parties to this dispute, and to determine whether the Geneva Convention and/or the rules of international customary law have been affected by the UNCLOS III proceedings and related state practice.

Conventional international law. Article 1 of the Geneva Convention on the Continental Shelf provides that:

> For the purpose of these Articles, the term 'continental shelf' is used as referring (a) to the sea-bed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 200 metres or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas; (b) *to the sea-bed and subsoil of similar submarine areas adjacent to the coasts of islands.* (Emphasis added)

Although the term 'island' is not defined in this Article, it would seem proper to assume that it might be defined, following Article 10 (1) of the Geneva Convention on the Territorial Sea and the Contiguous Zone (1958) as 'a naturally formed area of land, surrounded by water, which is above water at high tide'. There is no hint anywhere in the Geneva Convention that, in order to qualify for a continental shelf, an island must satisfy any other tests of, for example, size, habitability or capacity to support economic life of its own.

International customary law. That the position is the same in international customary law as it developed before UNCLOS III is suggested by the International Court's description of Article 1 as one of 'three Articles ... which, it is clear, were then [in 1958] regarded as reflecting, or as crystallizing, received or at least emergent rules of customary international law relative to the continental shelf...'.[118] It is confirmed, so far as the definition of an island is concerned, by the record of attempts, before 1958, to define an island. Thus, at the Hague Codification Conference in 1930, although many governments, including that of the UK, advocated the view that an 'island', to qualify as a legal island entitled to its own territorial sea, must be a piece of territory capable of occupation and use, these criteria were not accepted by the Conference.[119] Instead, Sub-Committee II of the Second Committee adopted the following draft rule:

> (i) Every island has its own territorial sea. An island is an area of land, surrounded by water, which is permanently above high water mark.[120]

It is true that there is some evidence for the view that international customary law has not recognized that rocks are entitled to a territorial sea or other maritime zone of their own.[121] However, the

[118] *ICJ Reports 1969*, p 39.

[119] N. Papadakis, *The International Legal Regime of Artificial Islands*, Sijthoff, Leyden, Netherlands, 1977, pp 91-92. On the UK Government's view at that time, see Symmons, *op cit*, Ref 1, p 91, citing LON Doc C.74, M.39, 1929, Part VI.

[120] *Ibid* (Papadakis).

[121] See further L.F.E. Goldie, 'The International Court of Justice's "Natural Prolongation" and the continental shelf problem of islands', *Netherlands Yearbook of International Law*, Vol IV, 1973, pp 237-261, at pp 243 and 248-249. See too Symmons, *op cit*, Ref 1, p 73, note 41 and pp 76-77.

evidence refers very largely to state practice of an earlier period and would not seem to be supported by more recent practice.[122]

UNCLOS III and related state practice. If the relevant provisions of UNCLOS III's Informal Composite Negotiating Text eventually become law, there will be a radical shift in the regime of islands and rocks. After analysing those provisions, the question will be considered whether, pending the entry into force of such conventional rules, the UNCLOS III proceedings and the state practice to which they gave rise have resulted in a change in the previously existing rules of the Geneva Convention and/or international customary law.

Unlike Article 1 of the Geneva Convention on the Continental Shelf (1958), Article 76 of the ICNT (definition of continental shelf) makes no reference to islands. Instead, the 'Regime of islands' is established in Part VIII of the ICNT.

Under Article 121(1), an island is defined in language identical to that of Article 10(1) of the Geneva Convention on the Territorial Sea and the Contiguous Zone (1958):

> 1. An island is a naturally formed area of land, surrounded by water, which is above water at high tide.

Nor does the general rule of paragraph 2 differ in substance from the corresponding rules of the 1958 Geneva Conventions:[123]

> 2. Except as provided for in paragraph 3, the territorial sea, the contiguous zone, the exclusive economic zone and the continental shelf of an island are determined in accordance with the provisions of the present Convention applicable to other land territory.

Paragraph 3, on the other hand, introduces an entirely new rule which, in view of its vagueness, calls for detailed consideration. Paragraph 3 provides that:

> 3. Rocks which cannot sustain human habitation or economic life of their own shall have no exclusive economic zone or continental shelf.

What is a rock? The Geneva Convention on the Territorial Sea and the Contiguous Zone (1958) (the only one of the four Geneva Conventions of 1958 to define the term 'island') referred to 'islands' and 'low-tide elevations' (drying rocks), but did not make any specific mention of 'islets', 'rocks', or any other subdivision of islands. Nor, as has been seen, did it make reference in its definition of an island to any quantitative criteria other than the necessity of being above water at high tide. As a result, even small, barren rocks were generally regarded as falling within the definition of an island and as being entitled to their own belt of territorial sea and continental shelf. If UNCLOS III is to introduce a new rule, along the lines of Article 121(3), it is essential, if confusion and disputes are to be avoided or minimized, that the term 'rock' should be defined. Unfortunately, no definition is to be found in the ICNT.

Hodgson has defined a 'rock' as having an area of less than 0·001 square miles (27 878 square feet or 2590 square metres).[124] Hodgson and Smith point out that, on the assumption that a 'rock' is smaller than a 'small islet' as defined by the International Hydrographic Bureau (IHB) (1 to 10 square kilometres), then the area of a rock according to the IHB classification would be less than 1 square kilometre, (0·3906 square miles or 1 million square metres).[125] The

[122] Eg, Goldie, *op cit*, Ref 121, p 248, refers to a British Board of Trade decision of 1905 that Eddystone Rock and Lighthouse do not possess a territorial sea. However, in the *Anglo-French Continental Shelf* case (1977), the UK government not only challenged the interpretation put upon this decision by France but went on to argue that 'there is clear evidence that contemporary British practice treats the Eddystone Rocks as an island for all purposes, including the use of the low-water line around this island for the measurement of maritime zones' (*Decision*, Para 128). The Court of Arbitration, without taking a position on the precise legal status of Eddystone Rock, found that it should be treated as a relevant base-point for the delimitation of the continental shelf boundary in the Channel (*Decision*, Para 144).

[123] Articles 10(2) and 24(2) of the Convention on the Territorial Sea and the Contiguous Zone and Article 1(b) of the Convention on the Continental Shelf.

[124] R.D. Hodgson, 'Islands: normal and special circumstances', in J.K. Gamble and G. Pontecorvo (eds), *Law of the Sea; Emerging Regime of the Oceans*, Ballinger Publishing Co, Cambridge, Mass, 1974, pp 150-151.

[125] Hodgson and Smith (*op cit*, Ref 32), p 230.

IHB 'rock' would thus be nearly 400 times larger than the Hodgson 'rock'! There is, of course, no indication that UNCLOS III had either of these definitions in mind when drafting Article 121 – or, indeed, that they were aware of the problem.

The text is also intolerably imprecise on the meaning of 'cannot sustain human habitation or economic life of their own'. There are two criteria, almost equally vague. The first test refers to capacity to sustain human habitation rather than the actual existence of human habitation. But, when is a rock uninhabitable? The absence of sweet water might provide such a test; but what if supplies reach the rock from the mainland or a desalination plant is installed? And again, must the rock be able to produce the minimum necessities of life independent of outside supplies before it can be regarded as habitable? Would the presence of a lighthouse keeper, supplied from without, provide evidence of habitability?

The second test of 'economic life of their own' is equally difficult to apply. Surely any rock anywhere could arguably be said to have economic life of its own if a lighthouse or other aid to navigation were placed upon it.

The human habitation/economic life formula is not a new one. A very similar proposal is to be found in a Resolution of the Imperial Conference, 1923, one of a series of resolutions embodying a common policy for the British Empire on the question of the limits of territorial waters. Resolution 4 was expressed in the following terms:

> The coastline from the low-water mark of which the 3-mile limit of territorial waters should be measured, is that of the mainland and also that of all islands. The word 'island' covers all portions of territory permanently above high water in normal circumstances and capable of use or habitation.[126]

In the explanatory memorandum which the Conference had before it, it was said that:

> 22. The phrase 'capable of use or habitation' has been adopted as a compromise. It is intended that the words 'capable of use' should mean capable, without artificial addition, of being used throughout all seasons for some definite commercial or defence purpose, and that 'capable of habitation' should mean capable, without artificial addition, of permanent human habitation.
> 23. It is recognized that these criteria will in many cases admit of argument, but nothing more definite could be arrived at in view of the many divergent considerations involved. It is thought that no criteria could be selected that would not be open to some form of criticism.[127]

There is no doubt much truth in the last observation and certainly a reformulation of Article 121(3) to include some such phrase as 'without artificial addition' would greatly improve it.

It must be said, however, that, in its present form, Article 121(3) appears to be a perfect recipe for confusion and conflict. As Hodgson and Smith have noted, 'Many small, uninhabitable islands, which certainly would not normally be considered rocks, are situated throughout the world's oceans. Who is to determine whether these islands are to be considered under the terms of the article?'[128]

It is, of course, impossible to say how significant this provision is unless a definition of a 'rock' is provided or assumed. If, however, the Hodgson definition is adopted, it appears that the vast majority of 'rocks' are situated immediately offshore and that to deprive them of a continental shelf of their own would not be a matter of much significance.[129] Nor, it seems, are there a large number of non-coastal

[126] Imperial Conference, 1923. Report of Inter-Departmental Committee on the Limits of Territorial Waters. (Document T.118/118/380 (1924); Public Record Office Ref F.O. 372/2108), p 5.
[127] *Ibid.*
[128] Hodgson and Smith (*op cit*, Ref 32), p 232.
[129] *Ibid*, pp 231-232.

rocks. It has to be remembered, however, that non-coastal rocks such as Rockall (approximately 624 square metres; 0·000241 square miles)[130] may well attract a very considerable area of additional continental shelf for the coastal state concerned in the absence of any such provision as Article 121(3). On the other hand, the areas concerned are quite insignificant in a global context and the better course might well be therefore to delete this provision altogether.

If Article 121(3) is retained, UNCLOS III will need to reconsider Article 13. Under this provision, the low-water line on low-tide elevations (drying rocks) may be used as a baseline for measuring the breadth of the territorial sea where the low-tide elevation is situated at a distance not exceeding the breadth of the territorial sea from the mainland or an island. It follows of course that the same baseline would be used for measuring the breadth of the exclusive economic zone under Article 57 and of the continental shelf under Article 76. It would be somewhat incongruous if, as a result of Article 121(3), *rocks* similarly situated did not have even as much influence on the baseline as *drying rocks*. If Article 121(3) is retained, the solution would be to amend Article 13 in order to place such rocks in the same position as drying rocks.

Turning now to the effect of the ICNT and related state practice on preexisting law, needless to say, if UNCLOS III were to produce a Convention incorporating the substance of ICNT draft Article 128(3), and the Convention became binding on the parties to this dispute, Rockall would generate only a belt of territorial sea. Pending the entry into force of any such Convention, it seems unlikely, but the possibility must be considered, that a court or tribunal would hold that the UNCLOS III proceedings and related state practice had effected a change in the Geneva Convention and/or in international customary law.

Any such court or tribunal would, of course, be bound to follow the example of the ICJ in the *Fisheries Jurisdiction* case (1974) and decline to 'render judgment *sub specie legis ferendae*, or anticipate the law before the legislator has laid it down'.[131] It is true, however, that it would also be able to emulate the Court of Arbitration in the *Anglo-French* case. Thus, in relation to a dispute between parties to the Geneva Convention on the Continental Shelf, such as Denmark and the UK in the present case, it might follow the Court of Arbitration in recognizing 'both the importance of the evolution of the law of the sea which is now in progress and the possibility that a development in customary law may, under certain conditions, evidence the assent of the States concerned to the modification, or even termination, of previously existing treaty rights and obligations'.[132] Similarly, in relation to a dispute involving a non-party (such as Ireland) which would have to be resolved on the basis of international customary law, it might hold, following the Court of Arbitration, that 'it should take due account of the evolution of the law of the sea in so far as this may be relevant in the context of the present case'.[133]

Although it seems almost certain that the UNCLOS III proceedings and related state practice could not be regarded as reflecting an assent by, *inter alia*, the UK to a modification of the Geneva Convention, so far as it concerns the continental shelf of islands, a stronger case can be made for arguing that the state practice on this question, including the views reflected in the UNCLOS proceedings, is trending strongly in the direction of draft

[130] *Ibid*, p 232.
[131] *ICJ Reports 1974*, p 3, Para 53.
[132] *Decision*, Para 47.
[133] *Ibid*, Para 48.

Article 128(3). Given also the less than certain position of rocks in international customary law, as developed before UNCLOS III, it is not beyond the bounds of possibility that a tribunal might now find, or shortly would find, that the rule in draft Article 128(3), by virtue of its clearly demonstrated general acceptability as a rule of customary law, must now be recognized as such.

Thus, to sum up, before UNCLOS III, the Geneva Convention of 1958 and the rules of international customary law were at one in not recognizing any distinction between islands, islets and rocks, so long as they were not simply low-tide elevations. Accordingly, rocks such as Rockall would be entitled to a continental shelf of their own. It still seems improbable that a court or tribunal would hold that this state of the law has been altered by the proceedings of UNCLOS III and related state practice. There is little doubt, however, that state practice is trending in the direction of ICNT Article 128(3) and the time may shortly come when it would be held that a new rule of international customary law had crystallized around the formula in Article 128(3). In that event, rocks such as Rockall would generate only a belt of territorial sea.

Delimitation of the exclusive economic zone

As noted above in the introductory section, the UK has not yet laid claim to an exclusive economic zone (EEZ) – as distinct from the less comprehensive exclusive fishing zone – nor has UNCLOS III completed its work on the draft articles of the negotiating text dealing with this zone. Reference can only be made therefore to the provisions of the Informal Composite Negotiating Text as they stand following the work of the Sixth Session of UNCLOS III.

Definition of EEZ and delimitation of outer limit

Article 55 of the ICNT, which deals with the 'specific legal regime' of the EEZ, describes it as 'an area beyond and adjacent to the territorial sea'. Article 57, on the breadth of the EEZ, provides that 'The exclusive economic zone shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured'. The EEZ may then be defined as 'an area beyond and adjacent to the territorial sea, not extending beyond 200 nautical miles from the baselines of the territorial sea'.

The problems associated with the delimitation of the EEZ 200-mile line are thus the same as those of the continental shelf in cases where the continental margin does not extend out as far as 200 miles from the baseline of the territorial sea.[134]

Delimitation of the EEZ between neighbouring states

The rules in Article 74 of the ICNT on delimitation of the EEZ between adjacent or opposite states are, *mutatis mutandis*, identical to the corresponding rules on the continental shelf in Article 83:

1. The delimitation of the exclusive economic zone between adjacent or opposite States shall be effected by agreement in accordance with equitable principles, employing, where appropriate, the median or equidistant line, and taking account of all the relevant circumstances.
2. If no agreement can be reached within a reasonable period of time, the States concerned shall resort to the procedures provided for in Part XV.

[134] See above, subsection on the Informal Composite Negotiating Text, and *op cit*, Ref 2, pp 389-390.

3. Pending agreement or settlement, the States concerned shall make provisional arrangements taking into account the provisions of paragraph 1.
4. For the purposes of the present Convention, 'median or equidistant line' means the line every point of which is equidistant from the nearest points of the baselines from which the breadth of the territorial sea of each State is measured.
5. Where there is an agreement in force between the States concerned, questions relating to the delimitation of the exclusive economic zone shall be determined in accordance with the provisions of that agreement.

The problems to which these provisions give rise – as they apply under Article 83 to the continental shelf – have been referred to above.[135] Despite the similarity of the language, however, Article 74 raises a quite new question, in that it applies to an area which is different in nature from that of the continental shelf.

As seen above, the formula adopted in Article 83(1) and repeated in Article 74(1) has its origins in the Judgment of the International Court of Justice in the *North Sea Continental Shelf* cases. However, the principles and rules identified by the Court as applicable to the delimitation of the continental shelf were arrived at on the basis of an analysis of the nature of the concept of the continental shelf as it had developed since it was first positively stated in the Truman Proclamation. Thus, the reference to the notion of the natural prolongation of land territory into and under the sea, and the 'factors' to be taken into account by the parties in reaching an agreement on the basis of those principles and rules, were inextricably linked with the Court's conception of the continental shelf as being an area which appertained to the coastal state by virtue of its sovereignty over the land of which the shelf is the natural extension. The concept of the EEZ is entirely different, however. There is no question of the equity of a delimitation of the EEZ being determined by reference to the notion of a natural prolongation and the 'factors' or, in the language of Article 74(1), 'all the relevant circumstances' to be taken into account, will certainly not be those which would be appropriate in relation to the continental shelf.

The basic fact is that the EEZ is an entirely artificial, man-made zone, in the sense that it bears no relation to natural features such as the continental margin. It would surely have been much more appropriate to such a zone to have adopted the formula in Article 6 of the Geneva Convention on the Continental Shelf. Thus, failing agreement by the parties on a boundary, the residual equidistance principle would have applied in the absence of any special circumstances. This equidistance principle seems to be much more in keeping with a zone, the outer limits of which are determined solely by reference to a quantitative formula rather than a natural submarine feature. Moreover, the Geneva formula has the advantage of using language ('special circumstances') the meaning of which is reasonably ascertainable. If, on the other hand, the present text of Article 74 is adopted, the meaning of 'equitable principles' and 'all the relevant circumstances', having no history in state practice and no definition in the text, will be exceedingly difficult to determine. Dispute settlement on the basis of such a formula would probably prove a hazardous and unpredictable process. Potential parties to the new convention may well think twice before accepting such a gamble.

The EEZ of islands and rocks

The problems raised by Article 121 of the ICNT are the same for both

[135] See above, subsection on 'The rules emerging from UNCLOS III'.

the continental shelf and the EEZ and have been considered above.[136]

Delimitation of exclusive fishing zones

In its Judgment in the *Fisheries Jurisdiction* case, as recently as 1974, the International Court of Justice stated that:

> Two concepts have crystallized as customary law in recent years arising out of the general consensus revealed at that [1960 Geneva] Conference [on the Law of the Sea]. The first is the concept of the fishery zone, the area in which a State may claim exclusive fishery jurisdiction independently of its territorial sea; the extension of that fishery zone up to a 12-mile limit from the baselines appears now to be generally accepted.[137]

The Court acknowledged 'that a number of States has asserted an extension of fishery limits' in recent years. It was also aware of 'present endeavours' in UNCLOS III and of 'various proposals and preparatory documents produced in this framework'.[138] It took the view, however, that they 'must be regarded as manifestations of the views and opinions of individual States and as vehicles of their aspirations, rather than as expressing principles of existing law'. The Court came to the conclusion that, 'In the circumstances, the Court, as a court of law, cannot render judgment *sub specie legis ferendae*, or anticipate the law before the legislator has laid it down'.[139] The Court went on to hold, *inter alia*, that Iceland's Regulations on Fishery Limits of 1972, extending her exclusive fishing limits to 50 miles, were not opposable to the UK.

Three years later, the picture has been quite transformed as a result of further developments in state practice. In 1972, when Iceland issued its 50-mile Regulation, only 11 states (10 in Latin America) claimed an exclusive fishing zone (or more comprehensive territorial sea) of 200 miles.[140] By 1 January 1977, the figure had risen to 34,[141] and all the indications are that this is an accelerating trend.[142] It would probably be correct to say that most maritime states have recognized or very shortly will recognize, the legitimacy of claims to exclusive fishing limits out to 200 miles, and that a rule of international customary law to that effect is on the point of crystallization.

For the purposes of this article, it will suffice to note that all of the states bordering the Rockall sector have claimed 200-mile limits. Iceland led the way in 1975 and Ireland, Faeroes and the UK followed with effect as from 1 January 1977 as part of a concerted change in policy by the member states of the European Economic Community.[143]

The exclusive fishing zone being such a recent concept, it is not surprising that rules have not yet developed to cover such questions as delimitation with neighbouring states or the status of rocks in relation to the delimitation of such zones. No doubt, such rules will be agreed upon in time if the concept of the exclusive fishing zone is not superseded by that of the more comprehensive exclusive economic zone. In the meantime, there are probably grounds for saying that there now exists a rule of international customary law for the delimitation of maritime zones between neighbouring states, a rule having its origins in general treaties governing the delimitation of various maritime areas and probably transformed into a customary norm by its general acceptance among states. That rule is the three-point (agreement-equidistance-special circumstances) rule to be found

[136] See above, subsection on 'The Continental Shelf of islands and rocks'.
[137] *Fisheries Jurisdiction (United Kingdom v Iceland), Merits, Judgment, ICJ Reports 1974*, p 3, at p 23, Para 52.
[138] *Ibid*, Para 53.
[139] *Ibid.*
[140] See E.D. Brown, 'Iceland's fishery limits: the legal aspect', *The World Today*, Vol 29, No 2, 1973, p 68, at p 77.
[141] See tables in R. Churchill *et al* (eds), *New Directions in the Law of the Sea*, Oceana Publications, New York, Vol VI, 1977, p 843 *et seq*, especially at pp 882 (200-mile territorial sea claims) and 883 (200-mile exclusive fishing zone claims). See also R. Churchill, '200-mile limits: recent claims', *Marine Policy*, Vol 1, No 3, 1977, pp 255-258.
[142] The list includes the following important maritime states: Argentina, Brazil, Canada, Chile, Denmark, Ecuador, France, the Federal Republic of Germany, Iceland, India, Ireland, Japan, Mexico, New Zealand, Norway, Peru, the USSR, the UK and the USA.
[143] *Ibid.*

in Article 12 of the Geneva Convention on the Territorial Sea, Article 6 of the Geneva Convention on the Continental Shelf, and Article 7(5) of the Geneva Convention on Fishing and Conservation of the Living Resources of the High Seas, all of 1958.

All three of these provisions relate to some extent to fishery zones. Thus, when the Territorial Sea Convention was concluded in 1958, the concept of the exclusive fishery zone had not yet emerged and the geographical scope of a coastal state's fishery rights was co-terminous with the extent of its territorial sea. It follows that, in the beginning, Article 12 provided the rules for the delimitation of the coastal state's exclusive fishery limits, these being the same as the limits of the territorial sea. Article 7(5) of the Fishing and Conservation Convention is, of course, more directly concerned with fishery matters and it incorporates by reference 'the principles of geographical demarcation as defined in Article 12 of the Convention on the Territorial Sea ...' Finally, Article 6 of the Continental Shelf Convention relates to fisheries in that the natural resources of the continental shelf are defined to include sedentary fisheries.

Failing agreement between the parties, therefore, the rules would seem to be that an equidistance boundary should be constructed unless there are special circumstances present. As regards rocks, the same considerations would seem to apply, *mutatis mutandis*, as in relation to the continental shelf.

Conclusion

A settlement of the dispute over maritime boundaries in the Rockall sector will have to be reached by application of the rules of international law on the delimitation of the continental shelf and exclusive fishing zones. Furthermore, if, pending a settlement, the parties to the dispute lay claim to an exclusive economic zone, the rules governing this new zone will also have to be applied. If, however, anything stands out from the above examination of these rules, it is the fact that they are at present exceedingly complex and uncertain and their application in the Rockall sector confronts the negotiator with very real difficulties. The legal difficulties are moreover aggravated by the equally complex nature of the geography and geology of the area. Man can hardly alter these facts of nature. Whether he can simplify the problem by reaching agreement on a new set of legal rules may become apparent during the Seventh Session of UNCLOS III. A report on the outcome of that Session will be included in the second instalment of this article, together with an analysis of the claims made by Denmark, Ireland and the UK.

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Annex 46

R. CROCOMBE, *THE PACIFIC ISLANDS AND THE USA*, *CHAPTER 2 - TERRITORY*, INSTITUTE OF PACIFIC STUDIES, UNIVERSITY OF THE SOUTH PACIFIC, 1995

2

Territory

Expansion, then Contraction, of the US Pacific Empire

Introduction

Control over space (whether land, water or air), is an important indicator of power, but it is diminishing as control of money, information, media, policies and politicians become more salient. This chapter outlines territorial control as one index of the growth of US influence in the region from the early 1800s until after the end of World War II in 1945, and its decline thereafter. The growth and decline are both consistent with a range of other factors which are discussed in later chapters.

Territorial control takes various forms, the most obvious of which is constitutional. US territorial interest had a strong military component, and all 12 US Pacific territories were acquired by the military. Military use is still important in most of them, though it too is in decline.

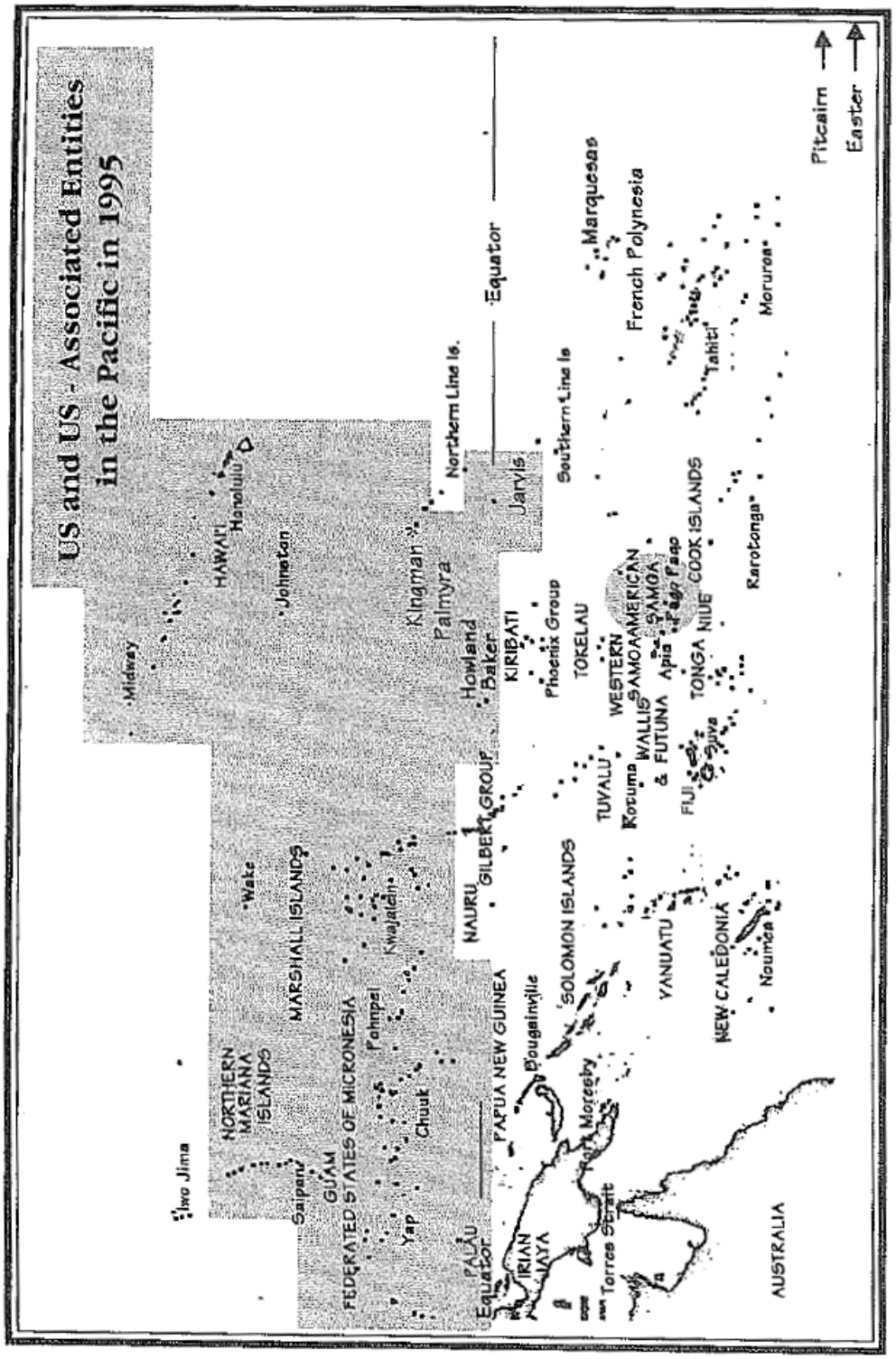
Private acquisition of land by Americans was enormous in Hawaii, and was a significant factor leading to annexation. Elsewhere it was not extensive - some in Tahiti and relatively small areas throughout. Everywhere, the proportion owned by Americans has declined since the 1970s.

Attitudes to Land and Sovereignty

Americans, like others deriving from Europe in that era, regarded most land as a marketable commodity and sovereignty a prerogative of nation-states. Indeed, they recognized many forms of tenure other than freehold, and sovereignty vested in hereditary rulers as well as elected governments. They were not generally aware, however, that Pacific Islanders had radically different notions of land tenure and of sovereignty. To the extent that they were, they generally assumed that freehold tenure and nation-states were 'civilized' and therefore better.[1]

Myths and Realities

Hawaii and Guam were far from the first US territories acquired in


US and US - Associated Entities
in the Pacific in 1995
Midway
HAWAII
Honolulu
Johnston
Kingman
Palmyra
Howland
Baker
Northern Line Is.
Equator
Jarvis
Southern Line Is
Marquesas
French Polynesia
Tahiti
Moruroa
Pitcairn
Easter
Iwo Jima
NORTHERN MARIANA ISLANDS
Saipan
GUAM
MARSHALL ISLANDS
Wake
FEDERATED STATES OF MICRONESIA
Yap
Pohnpei
Kwajalein
Chuuk
PALAU
Equator
NAURU
GILBERT GROUP
KIRIBATI
Phoenix Group
TOKELAU
TUVALU
Funafuti
Nukumanu
WESTERN SAMOA
WALLIS & FUTUNA
Apia
Pago Pago
SAMOA
FIJI
Suva
TONGA
NIUE
COOK ISLANDS
Rarotonga
PAPUA NEW GUINEA
Bougainville
SOLOMON ISLANDS
VANUATU
NEW CALEDONIA
Noumea
Port Moresby
Torres Strait
IRIAN JAYA
AUSTRALIA

the Pacific, even though most Americans think they were. Every nation has its protective mythology to assure its people of its virtues, for one of the functions of mythology and ideology is to hide reality. Most history - anywhere - reflects the prevailing mythology and ideology, the 'balanced' and 'respected' view being relative to the distribution of power in the perceiving context. The academic world debates and refines the details, but reinforces the parameters, giving myths the sanctity of scientific truth until the balance of power shifts, when we academics jump on the bandwagon, take another look at the historical evidence and discover new truths that are more congruent with the new and emerging structure of power.

Perhaps more important than the incorrect belief in USA that it did not acquire territory before Hawaii, is the equally incorrect belief that this was a matter of principle. Incorrect too is the belief imbedded in US history that the acquisition of Hawaii, Guam and the Philippines was an 'aberration', a unique departure from US policy and practice.

In fact, the US government was one of the most active in the world in the 1800s in acquiring territory, though there was so much of it to acquire from native tribes on the continent that there was less incentive to acquire it beyond than there was for other expanding powers. In the early phase USA had neither the economic nor the military power to do so either, but as soon as those developed, there was no reluctance to use naval power to acquire land or other advantage abroad if the benefits seemed to outweigh the costs.

Americans could hardly expand in Europe, having just escaped from there. Having driven Canadians as far north and Mexicans as far south as they could, and with Latin America carved up by Spain and Portugal and the independent nations which succeeded them, and the Europeans having beaten them to Africa and most of Asia, the obvious area for expansion - to the extent of their power to do so - was the Pacific. Expand in the Pacific they did, with similar plans and strategies to those of other expanding powers. It was a continuation of US westward expansion, blocked in the north by Russia's eastward expansion (although Russia's colonies in California and Alaska were taken over by 1867), and by the massive populations of the Northeast Asian states.

Nor was it a case of seeking only uninhabited islands. Many densely populated small islands in the Cook Islands, Kiribati, Tokelau and Tuvalu were declared to be US territory without consulting or even informing the inhabitants. The reason the declarations of US sovereignty were not all followed up had little to do with whether they were inhabited or not, but with whether they contained resources of value to USA.

With the partial exception of American Samoa (as explained below), indigenous owners were not consulted about the acquisition of territory by USA in the Pacific Islands. O'Donnell's research confirms the work of Joseph A. Fry who "argues with telling cogency that America's `territorial grab' at the end of the century was `not uncharacteristic of prior or subsequent national behaviour'" (O'Donnell 1993:44). He also says that Ernest Dodge's statement, which reflected the conventional view, that "USA was the slowest of the Pow-

ers to take definite political action in the Pacific":

> ...cries out for rebuttal. There is unassailable evidence of American primacy in Hawaii after 1842, the year of...the Tyler doctrine that any foreign intrusion in the affairs of 'those islands' would result in a 'decided remonstrance' by the United States. Hawaii became the linchpin of American Pacific policy.... There is insurmountable evidence of American gunboat diplomacy in China and Japan, of the competition with the European powers in Samoa, of unequal force applied in Fiji, and of the constabulary and surveillance role of the United States Pacific Squadron maintaining a presence in the Pacific precisely in the fashion of other powers (O'Donnell 1993:45).[2]

No One has a Monopoly on Greed

USA was no worse than other expanding powers, which generally use whatever resources they have to improve their own position to the extent their decision-makers think achievable and in the context of their perceived advantage.

Nor were the expanding White powers much different from the preceding indigenous Pacific Islands mini-empires. As in Europe, Asia and elsewhere, some powerful Pacific Islands communities in pre-European times could have expanded but did not. Where there was no advantage in having more land, or it was difficult to defend, there are many examples of no action being taken, or people being left on the land but subordinated to extract material and psychological benefits from them in tribute, trade and rituals of inferiority. On the other hand many Pacific Islands power groups clubbed and ate their way to other people's property, or to power over them. As everywhere, much depended on the technology available to express one's power and the benefits to be derived.

So if no one in the past was blameless in relation to the property of others in the Pacific, are those in the future likely to be better? I see no evidence for it. The two recent examples are Japan in Micronesia from 1914 to 1944, and in Melanesia from 1942 to 1944; and Indonesia's takeover of Irian Jaya in 1962 and East Timor in 1976. Neither were any less brutal or forceful in seeking their self-interest than Europeans or Pacific Islanders before them. The current build-up of power is in East Asia. All conquerors clothe their self interest in a rhetoric of bringing better religion, culture, society, economy or leadership.

Among the growing powers of East Asia that will impinge on the Pacific Islands, Indonesia fought for years to conquer Malaysia, the Philippines, Singapore and Brunei in the 1950s. It gave up, not because of a change of heart, but because it failed in that objective at that time. Then Indonesia swallowed West Irian and East Timor, which were small and fragmented, when no one with power considered it in their interest to help them. China's takeover of Tibet, the expansionism of Vietnam, or the bitter dispute by all the surrounding countries over the tiny Spratley Islands, suggests that Asian nations will exercise power in the Pacific Islands in whatever way they con-

sider to be to their advantage.[3]

Expanding powers in future may not take so much land, for in the post-industrial economy land is a small factor of production - though that does not rule out the possibility of it being taken. And there may not be as much emphasis as in the past on constitutional control of nations, for national governments are becoming less relevant as a means of exerting power and extracting gain. Influence over key politicians, businesses, information, communications, media and technology is now more valuable than constitutional rights. Even with constitutions, their operation matters more than their form.

The interest here is with the context in which USA acquired lands and sovereignty, for that little known story is part of the background needed to understand the present and future of USA/Pacific Islands relations.

Early US Interests Required Neither Land nor Sovereignty

The first was oil, which was then most easily available from whales, which were plentiful in the Pacific. International law on territorial waters gave the adjoining nation exclusive rights (except for innocent passage), for six miles from the shore, but even that was not recognized in the Pacific Islands as they were not regarded as 'nations'. So long as supplies and recreation were available, whalers had no need for the hassle of sovereignty. From as early as 1776 through to the 1860s, Americans were the most numerous whalers, and whalers were the most common ships in Oceania. Neither Americans nor any other nationality, including Pacific Islanders, had any compunction about exploiting whales to extinction - or seals, or turtles, or any other marine creature whose fat or flesh or fur or shell could be sold for profit.

The next interest was sandalwood. Hawaii was the largest source and Americans the main buyers - mainly for sale in China. Again, one needed neither ownership of the land nor sovereignty over the islands provided one could negotiate with compliant chiefs to exploit the fragrant tree. The sandalwood was logged to destruction - much as Japanese and Malaysian loggers are now destroying the massive forests of Melanesia. No attempt was made to replant or to log the large and leave the small to grow. By 1830 destruction was almost complete.

The Quest for Guano and Naval Bases

The things Americans wanted next required more control. The main one was guano, which made the best fertilizer for USA's expanding agriculture. Supplies from Peru were becoming scarce and expensive. The other wish was for naval bases, partly to facilitate access to guano and other products, but even more to control the seas between USA and Asia and Australasia. Those two motives resulted in USA taking every single Pacific island north of the equator (with the exception of the northernmost atolls of Kiribati), and as many as it could get south of it.

From 1855 naval vessels were sent to explore for islands that might contain guano, and businessmen were officially encouraged to do the same. When President Pierce heard there might be guano on Baker Island, he ordered a warship to check it out. Similar orders were given at other times. The American Guano Company, the first of several, was floated with $10 million capital. Within months the Congress passed the Guano Act 1856, under which USA claimed 60 islands in the Pacific over the following years (and another 40 in the Caribbean and the Atlantic). Some of the islands had already been claimed by other metropolitan powers, in the cavalier way that captains then planted their national flag on any island that no other imperial power had claimed (or not that the captain knew of). Some of the islands were uninhabited (but not necessarily unclaimed, for many belonged to neighboring Pacific Islanders). Others had been inhabited for centuries, perhaps millennia.[4]

In 1867 the Navy was instructed to take possession for USA of any islands with good harbors and safe anchorages which might be used for coaling or naval stations in the trade between USA and Asia. Midway Island was annexed in 1867 as a mid-Pacific naval station, as well as for its guano. Long used by the Navy, and later the Air Force, it is administered by CINCPAC, but is now due for closure and is being handed to the US Fish and Wildlife Service.

Wake Island (Enenkio) was annexed in 1898 for use as a cable station. A Pan American airstrip was built in the mid 1930s, then a US military base before World War II. Taken by Japan in 1941, it was retaken by USA in 1945. Wake became an important refueling stop for trans-Pacific aviation until long-range jets overflew it from the 1960s. In 1975, some 15,000 Vietnamese refugees were accommodated there until they were accepted in USA. Although still administered by the US Air Force, its main use now is by small civilian aircraft and some large cargo aircraft to refuel on trans-Pacific flights.[5]

Palmyra was annexed by the Kingdom of Hawaii in 1862, but not occupied or administered. The United Kingdom (UK) annexed it again in 1889, but did not occupy either. In 1898 USA included it as one of the Hawaiian Islands which it had just acquired, but did not formally take possession until 1912. Its main significance to USA has been strategic, and during World War II it hosted 6,000 navy personnel. It was used as a military air base until 1961. Attempts to develop a resort there in 1962 failed.

The Hawaii Statehood Act of 1959 did not include Palmyra, and it was handed to the US Department of the Interior. The island has no permanent inhabitants, but is claimed as private property by the Fullard-Leo family of Hawaii. In 1979 the US government tried to buy out the Fullard-Leo family in order to use the island as a nuclear waste dump. Following opposition from the family, from environmental interests in USA, and from the heads of all Pacific Islands governments through the South Pacific Forum, the proposal was dropped. The island resumed its former state - visited by cruising yachts and the Coast Guard, and with frequent reports of use to tranship drugs carried by yachts between Asia and USA. In 1990 Peter Savio of Hawaii leased

Palmyra for 75 years and offered to sell the lease for $36 million for development as a resort. With no offers at that price, Mr Savio in 1993 prepared plans to develop a resort. Some leaders of the Hawaiian sovereignty movement claim Palmyra as part of a future independent nation of Hawaii.[6]

Palmyra, Kingman and Jarvis are geographically part of the Line Islands, all the rest of which belong to the Republic of Kiribati. Howland and Baker are closest to the Phoenix Islands, another part of Kiribati. Some I-Kiribati claim those islands belong to them, and the Kiribati government will probably claim them within a generation. Kiribati is desperately short of land, and trading that land (which USA does not use) to Kiribati is likely to occur in the context of some concession, support or favor USA wants from Kiribati in the future. The Kiribati government has declined to negotiate the EEZ marine boundaries between Kiribati and USA in respect of these islands. It hopes for concessions, at least in relation to fishing in the overlapping 200 mile zone.

The acquisition of American Samoa as a US Territory is described on page 26.

The Unique Case of the Bonin Islands (Ogasawara)

Lying between the Northern Marianas and Japan, these islands were uninhabited when a Japanese explorer claimed them for Japan in 1593. No trace of Japanese settlement has been found. Spaniards and others visited and in 1823 Captain Coffin of the whaler *Transit* claimed some but not all of them for USA. An English whaling master also claimed some of the group in 1825, and two years later Captain Beechey of the Royal Navy formally took possession for Britain. A Russian expedition the following year also claimed the islands. However, none of the claims was followed by administration or settlement (either of which would have strengthened the claims in international law).

In 1830 the Bonins were settled by a group of Americans, British and Hawaiians who soon found that 'independence' without ability to defend can be very risky. Passing ships traded with them for fresh foods to mutual benefit, but some exploited their vulnerability and stole their property and their women.

Nathaniel Savory, an American who became leader of the colonists, wanted USA to annex the islands to confirm the settlers' rights and protect them from marauders. In 1853, Commodore Perry saw the potential for a US naval base, so he purchased land on the harbor front from Savory, and reiterated the US claim, as did Captain King the following year. Both British and American flags flew over the islands at various times. However, with the opening of Japan to US commerce from the 1850s, there was no longer need for a coaling station and the US government did not proceed with annexation.

Once it appeared that USA was not pursuing its interest, Japan sent settlers in 1861, but the soil was unsuited to rice, so most of them returned to Japan. It was keen to annex but feared American and British claims. After Japanese settlement, the White settlers again appealed to the British Minister

in Tokyo for British protection, but the fact that the settlers flew an American flag did not help that application, and the Minister could get no clear reply from Japan as to its intentions. With no clear action by USA or UK, Japanese officials 'visited' the islands in 1875. The British Minister was suspicious and sent a consul to investigate, but the Japanese arrived first and annexed the islands. Since they guaranteed the rights of the British and American settlers (a guarantee they did not honor), the fait accompli was accepted.

Japan closed the islands to further non-Japanese settlers and filled them with its own. Some of the Whites and Hawaiians found the Japanese administration intolerable and moved to Guam in 1913, though they still claimed rights in Ogasawara. The population, mainly Japanese, grew to 8,000 by 1941, but by this time there had been considerable intermarriage (and many young mixed-race women were forcibly taken to Tokyo as prostitutes for military officers). During World War II 30,000 Japanese troops moved in and the civilians were sent to Tokyo. There was bitter fighting, particularly on Iwo Jima.

After the US Navy took control the US government debated whether to retain the islands. Only settlers of American descent were allowed to return, and the US navy established a submarine base. The settlers petitioned for US citizenship and US governance, but in 1968 the islands were returned to Japan. Some part-Americans remained, others moved to Guam. This, the first case of US withdrawal from a Pacific Islands territory, was intended to assuage criticism in Japan and elsewhere that USA held conquered land while pressuring other countries to return such land to the former owners.[7]

Kazan Retto and Minami Tori Shima were also returned to Japan in 1968. Used by Japan as military bases before and during World War II, they were occupied by US forces from 1945.

Olosega, a Floating Fragment

Olosega (Swain's Island) is geographically one of the four atolls of Tokelau. It was occupied by Tokelauans until a French entrepreneur shot one or more of them and took it over. He was later killed and an American, Eli Jennings, settled with his Samoan wife and family. Jennings is reputed to have shot someone and to have been "exceedingly brutal", so the Tokelauans fled and Jennings acquired it "without purchase or sale". In 1925 it was annexed by USA to American Samoa.[8]

Airports, Military Bases, and War-claims Bargaining

After the other colonial powers had lost their appetite for more territory, USA moved to pick up the pieces, stimulated by developments in aviation. Pan American wanted refuelling points for a proposed trans-Pacific service, and the military had similar interests.

Although the Guano Act of 1856 provided that islands could be relinquished once the guano was removed (as most of them were mere lumps of coral rock once the foliage and poor soil were removed and the guano extracted), none were formally relinquished. However, in international law,

such claims have no validity unless the claimant nation occupies, defends and/or continuously administers. For all the islands except those developed for military bases, the US claims were long since defunct. However, when the aviation interest emerged in the 1930s, USA reasserted its claims of 80 years before. Only after years of pressure were applied did USA finally relinquish claims to most of them in 1983 (see pages 35 - 38 for details).

The US claim was facilitated by the depression of the 1930s when the Department of State drew on work project funds to ascertain American 'discovery' of islands in the central Pacific. The "Results desired" were specified as:

> The Department of State is seeking evidence of the visits of American mariners to Pacific Islands [so] that claim to such islands may be made by the United States (Dodge 1966:11).

The project began in January 1940 with a staff of 50 under a retired Rear Admiral. Some islands might serve as landing places for civilian or military aircraft, others might have economic or other potential. In 1941 USA went to war with Japan. Whereas other projects were stopped, this one continued "to enable justification for possible claims at a future peace talk with Japan" (Dodge 1966:14).

Would any country with the power to force the issue, challenge the claims? The other colonial powers refuted claims to islands that were now their colonies. This did not stop the US assertions, even though it could not act upon them. The main negotiated case was the Phoenix Islands, then part of UK's Gilbert and Ellice Islands Colony and now of the Republic of Kiribati, which was being resettled from the overcrowded islands of the Southern Gilberts. USA unilaterally put Americans on Kanton and Enderbury in 1938, and the following year UK agreed to joint use of those two islands for 50 years. The Americans built an air base on Kanton.

Baker, Howland and Jarvis Islands were claimed by USA in 1935. UK had annexed Jarvis in 1889 and leased it to a guano mining company, but it was long uninhabited and UK did not object when USA took it over, along with the other two. The acquisitions were confirmed by Presidential Order in 1936. Several US 'colonists' were landed on each island to confirm possession, but they were evacuated in World War II, and the islands have been uninhabited since.

Kingman Reef was annexed in 1922. In 1934 it was put under the US Navy. In 1937-38 Pan American used it as a refuelling stop for flying boats, but being small and exposed, it was not used thereafter except in emergency for civilian or military purposes. Kingman, Howland, Baker, Jarvis and Palmyra are now administered by the Fish and Wildlife Division of the US Department of the Interior.[9]

Johnston Island (Kalama), was claimed by both the Kingdom of Hawaii and the UK in 1858, although already claimed by USA under the Guano Act two years before. In 1934, the US Navy took it as a seaplane base, and in World War II it was a submarine base as well. Used as a test site for high

altitude nuclear devices in the 1950s and 1960s, it has been controlled by the Defense Nuclear Agency since 1958. The island remains a standby site for potential nuclear weapons testing, but the main use is to store and dispose of chemical weapons. In the 1990s the destruction of these weapons became an issue, as discussed in chapter 14. Future claims from Kiribati and from Hawaii are likely.

Possession of Clipperton, closer to Mexico than to other Pacific Islands, was contested by USA in 1935, but awarded by international arbitration to France. Mexico wanted it too. It would be hard to imagine a more useless piece of land than Clipperton, but the territorial instinct is as deeply imbedded in humans as in other vertebrates, and they will fight with amazing vigor for its symbolic value as much as any other.

A special category of land for airports and bases was that taken temporarily during World War II and abandoned thereafter. In many cases there have been continuing benefits, such as the airports of Vila and Santo in Vanuatu, Honiara and Munda in Solomon Islands, Magenta in New Caledonia, Nadi in Fiji, Manus in Papua New Guinea (PNG), Funafuti in Tuvalu, and Aitutaki in the Cook Islands. These and many others facilitated the development of post-war air services. In other cases there were more problems than benefits, as in Vaitupu and other atolls of Tuvalu where there is exceedingly little land, but some of the best of it was compacted for airfields which made it useless for agriculture thereafter. Nor has it been usable for any other purpose. Moreover, scientists claim that the blasting of reef passages and other such construction changes the ecosystem and causes such unwelcome change as a rise in ciguatera poisoning. Such are the exigencies of war.

The Takeover of Hawaii

Though not annexed until long after the guano islands had been denuded and abandoned, US interest in Hawaii began long before. The Navy was an established institution there before the 1850s when warships supported attempts by US business interests to have the government of Hawaii accept US annexation. In 1854 the US Minister in Hawaii advocated annexation and reported that American and other foreign residents would take over in a coup if it were not annexed to USA (Boggs 1994:6). Major General Schofield recommended after a secret mission in 1873 that USA take Hawaii. In 1876 a trade agreement was signed and in 1887 Pearl Harbor was acquired for a US naval base. In the same year a coup by local Americans imposed the 'Bayonet Constitution' which enabled Americans to dominate the executive. In 1893 the *USS Boston* landed forces to support a coup organized by the American businessmen who had executed the 1887 coup, but this time on the instructions of the US Minister Plenipotentiary. Queen Lili'uokalani declared:

> I yield to the superior force of the United States of America....under protest, and impelled by such force...until such time as the Government of the United States shall, upon the facts being presented to it, undo the actions of its representatives and reinstate me...as the con-

stitutional sovereign of the Hawaiian Islands. (*Onipa'a Centennial Observance* 13-17 Jan 1993).

The US Minister in Hawaii recognized the new government immediately, thus implying its legitimacy. That recognition was not revoked, even though US President Cleveland did not approve his officials' request for annexation. His successor, McKinley, approved it in 1898 and Hawaii became a Territory of USA.

The imperfections of the monarchy might provide rationalization for reforming it, but not for replacing it first by another authoritarian government and then by a foreign one, taking sovereignty at the same time. However, the competition between expanding powers of that era was such that Hawaii would have been unlikely to survive without being taken over by, or at least accepting the 'protection' of, one or other major power. No other Pacific Island group managed to, including the Kingdom of Tonga which maintained its 'sovereignty' by becoming a UK Protectorate. With 100,000 Japanese in Hawaii, Japanese warships visiting Hawaii, and Japanese government aspirations becoming more evident, annexation by Japan was also possible. It was a factor in the US annexation (Miller 1991:19-21). Hawaii was developed into the largest US military base outside the mainland, and perhaps the largest offshore base of any nation in the world. It has remained so ever since.[10]

That is at the level of the US federal government. At the level of private citizens, most of the quality land was acquired by Americans, and to a lesser extent by other non-Hawaiians, during the 1800s. The landowners were the captains of commerce and industry, and tremendously influential in politics and government. Land was then the crucial factor of production and Americans owned most of it.[11]

The Conquest of Guam

The annexation of Hawaii in 1898 was part of a larger strategy of imperial expansion at the end of the Spanish-American war. In the same year USA conquered and took Puerto Rico and the Philippines, and required Spain to relinquish Cuba which came under US hegemony. Guam was taken as part of the process. At first used mainly as a coaling station, it was later developed into one of USA's largest offshore military bases. Administered by the Navy from 1898 to 1950 (except during the Japanese occupation) it was then handed to the US Department of the Interior, but the military remained the largest industry for a long time thereafter. A civilian administration was established in 1950, under a governor initially appointed by Washington. Self-government was slowly increased, though the US military remained a dominant force. It was from Guam that much of the bombing of Vietnam was undertaken from 1965 to 1975.[12]

The Negotiated Cession of American Samoa

In 1872 a US naval commander asked the chief of the area for exclusive rights to establish a naval station on the deep sheltered harbor of Pago

Pago. That was not ratified by the US Congress. Next an enterprising American, Colonel A.B. Steinberger, persuaded some Samoan leaders to petition for annexation by USA. Some settlers in Samoa were American but most were German. US commercial interest was small but the US Navy wanted a base, and in 1878 decided to establish in Pago Pago.

In 1899, UK and Germany renounced claims to Eastern Samoa in favor of USA. Germany was allocated Western Samoa and UK took reciprocal concessions elsewhere. USA wanted greater rights around the naval base and annexed it. The President handed administrative authority to the Navy. A few months after the fait accompli, the chiefs of Tutuila (the island on which Pago Pago is located) formally ceded that island and 'Aunu'u to USA. In 1904 the Manu'a Group was ceded also.[13]

These negotiations were facilitated by the fact that Samoa had been drained by civil war for decades, and the colonial powers were in the process of allocating control over it. The one option Samoans did not have was independence but, given the frequency of war, those who did not expect to win might have preferred association with a major power. German interest was in the plantations of Western Samoa.[14]

After more than half a century as a naval colony, changing military strategy led to the closure of the base in 1951. Political developments thereafter are dealt with in chapter 13.

Victory in Micronesia

The Micronesian Islands north of the equator had been claimed by Spain. After USA conquered Guam and defeated Spain, it was debating whether to acquire all of what is now CNMI, FSM and Palau, or just selected parts of it when, due to fast diplomatic work behind the scenes, Germany bought them from Spain. It was some time before anyone told the Micronesians! At the outbreak of World War I in 1914 Japan, which had for some time aspired to Pacific colonies, took the German Micronesian territories.[15]

During World War I the Allies took Germany's colonies around the world. After the war, the victors created the League of Nations to provide a framework for world government. The League legitimated the retention of the former German colonies by whichever country had taken them from the Germans. These were termed Mandated Territories but their administration was little different from that of other colonies of the same powers. Japan was given Micronesia, which it had occupied since 1914.[16]

During World War II, USA took the islands from Japan in a bloody and expensive war. There was a case to take them from Japan, but none to take them from the Micronesians. In any case they were a League of Nations Mandate, so when the United Nations (UN) began operations in 1947, the former mandates became UN Trust Territories, of which there were 11 in the world - 4 of them in the Pacific: New Guinea (under Australia), Western Samoa (under New Zealand), Nauru (administered by Australia for Australia, New Zealand and UK jointly), and the former Japanese territories in Micron-

esia. USA demanded and got a 'Strategic Trusteeship' over Micronesia, the only one in the world, which was designed by USA to serve US needs, including allowing USA to fortify the islands. This was agreed to by the other victorious powers to assuage strong pressures for annexation in some sections of the US government:

> The military argued for outright annexation [but] State Department had spent years developing the concept of trusteeship...recognizing the eventual demands for independence and self-government by former colonized peoples would be a major factor in the post-1945 world. A compromise...was found in designating Micronesia a STRATEGIC TRUSTEESHIP - an arrangement which would give the United States...near sovereign control (Moos 1993:12).

More bluntly, Stanley de Smith, a specialist in the government of small states, said "The concept of strategic trusteeship appeared to be de facto annexation, papered over with the thinnest of disguises" (quoted from de Smith 1970:128 in McHenry 1975:2). It was a misleading term for the strategic interest being protected was that of USA, whereas the principle of a Trust Territory was that the colonial power was to look after the interests of the colonized people.

The UN had been created by the Allied Powers that had won the war. As more countries became independent, the newer Third World nations gained the majority of seats in the General Assembly (though not in the all-powerful Security Council), and they strongly advocated independence. As each Trust Territory was decolonized, more pressure was put on the others to do the same; as with colonies, protectorates and other dependent territories. Western Samoa gained independence in 1962, Cook Islands self-government in 1965, Nauru independence in 1968. The UK decided in 1962 to relinquish all its Pacific territories as soon as possible. Fiji and Tonga were due for independence in 1970. Whereas most colonial powers were willing to relinquish the territories in the spirit of the Trusteeship, US was very reluctant. The contrast between US rhetoric about decolonization, and its performance relative to its own colonies, was becoming more apparent, and subject to more UN and other pressure. Realizing it would have to do something, and wanting to avoid independence, steps were undertaken to speed up the cultural, political and economic incorporation of the Micronesian territories into USA.

In December 1960 the UN passed its famous Resolution No 1514 requiring immediate steps to transfer all powers in trust territories and other non-self-governing areas to the peoples of those territories "without any conditions or reservations." The 1961 UN Visiting Mission's report was highly critical of USA for delaying Micronesia's political development and eroding its economy. This might have been expected if the delegation had been led by a communist or a 'Third World radical', but it was led by Sir Hugh Foot, a distinguished English colonial governor. The UK decolonized in situations much more difficult than Micronesia - and US pressure to do so was a factor

in that. Henceforth USA was hoist on its own petard. If its closest ally would not protect it in the UN, its strategy would have to change.

Moreover, "growing United States involvement in Southeast Asia placed the Trust Territory in a new light, no longer as a protective screen for the eastern Pacific, but now as a base or transit area for the projection of American power into the Western Pacific and Asia" (Donald Johnson, 1976:235).

These external pressures finally stimulated action. As in any country, diverse policies are advocated by different individuals in politics and the executive according to their ideologies and interests, by competing departments of government, and by various internal and external pressures. What matters is what policies are adopted as the outcome of the competing interests, and even more important what practices are implemented - for mere statement of policy often differs markedly from what is done on the ground. Two characteristics of US involvement stand out in Micronesia. First, the very low priority it was given in Washington irrespective of party in power. Second, the overwhelming emphasis given to US interests, and to US military interests in particular, rather than to those of Micronesians. Both characteristics are understandable given Micronesia's tiny size and few resources, its lack of leverage on USA, and the extent to which US concerns were predominantly military.

The crucial decision, approved by President John F. Kennedy and incorporated in his National Security Action Memorandum No. 145 of 18 April 1962, was to move Micronesia "into a permanent relationship with the US within our political framework". To achieve this integration with USA and to assuage UN and other charges of betraying its mandate, funding was increased dramatically from an average of $1 million a year from 1947 to 1952, then about $5 million a year until 1962, to $15 million in 1963 climbing to $60 million in 1971. Federal programs were greatly increased, and "programs from the Peace Corps to Head Start to Care for the Elderly...began flooding into the islands" (Johnson 1984:5). President Kennedy appointed a commission under Anthony Solomon to devise a plan to expedite the Americanization process.[17]

President Kennedy was assassinated shortly afterwards; Vietnam and other issues turned off the little limelight Micronesia ever had. Nevertheless the new US orientation was characterized by intensified Americanization and dependency creation. Although the crucial motivation for change was US self-interest, most power systems consider they are bestowing benefits on smaller system by absorbing, controlling or dominating them.

It is no different in the Pacific Islands - past or present, as PNG's ruthless suppression of the Bougainville independence movement showed, or Fiji's sending of soldiers to Rotuma "to shoot wild pigs" when a small group there proposed independence from Fiji, or the Tongan hereditary aristocracy's insistence on "looking after the people" instead of letting them look after themselves in a more democratic system. Fortunately for the Micronesians, USA had the funds to achieve its goals with large payments and heavy in-

doctrination, rather as Chile suppressed the independence movement in Rapanui and France in its Pacific territories - and in strong contrast to the brutal suppression used by Indonesia in its Pacific possessions.[18]

Although the Solomon Plan was not formally adopted, many of the strategies in it were implemented because the plan reflected the broad parameters of US policy and interests. A major goal of the Plan was for a huge infusion of money and procedures to bind Micronesia to USA and, when that had been achieved, to offer a choice (through a plebiscite) of independence or permanent affiliation with USA, which the planners were confident would give USA permanent control of Micronesia as it wanted for US strategic reasons. For example:

> The Mission recommends the following steps as part of the overall program to achieve our plebiscite objective...
>
> a. [American] staff to be recruited through the US Information Service to develop and maintain continuous liaison with the various leaders....to develop...interest among those people in permanent affiliation [with USA]. [The US staff would also perform a] political reporting function.
> b. ...development of Micronesian interest in, and loyalties to, the US by various actions, three of which are:
>
> 1. Sponsorship of Micronesian leader visits to the US.
> 2 US-oriented curriculum changes and patriotic rituals [in schools].
> 3. Increasing the number of scholarships [to USA].
>
> c. Peace Corps [to be brought in] because it is of critical importance to plebiscite attitudes....
> d. ...offer Micronesian government employees and other wage-earners...inducements to seek affiliation with the US (Excerpts from the Solomon Report as in Appendix 1 of McHenry 1975:231-9).

All this was consistent with what was done. We do not know what was in volume 1 of the Solomon Report because the US government still keeps it secret, suggesting that someone has a guilty conscience!

Solomon recommended developing the local economy, but US practice resulted in its shrinkage far below the levels achieved under the pre-war Japanese administration. Japan tried to Japanize the islands by swamping them with Japanese settlers (who outnumbered the Micronesians), contrary to the League of Nations Mandate. Japan had economic aspirations in Micronesia and developed sugar, rice, coconut and livestock farming by Japanese settlers for the Japanese market. The US government did not have a problem of surplus population so was not interested in settlement, but it had a strategic problem so it wanted long-term control. It was in the US interest to let the economy atrophy and for Micronesians to depend on USA for, as Sasaua Haruo of the Congress of Micronesia observed in 1973, an economically self-sufficient Micronesia could "negotiate with USA from a position of

strength. An economically dependent Micronesia must deal with the United States from a position of weakness" (cited in Johnson 1984:5). The Micronesian economies remain dependent on US funding today in "a form of induced dependency that was largely a product of American and allied security interests".[19]

The Americanization of Micronesia was pervasive, not because Americans differed from other colonial rulers, but they had more self-interest to defend and more resources to do it with. Few Micronesians were allowed out and they in limited numbers under close US supervision. When that was relaxed in the 1960s it was for those going to USA under US government programs. Due to UN pressure, selected Micronesians were included in US delegations to the Trusteeship Council from the 1950s, and could testify to US congressional committees after the Congress of Micronesia began in 1965, but it was more than 20 years after the US takeover before Micronesians were allowed significant participation with people of other Pacific Islands countries and territories, let alone the wider world.

Other people were not allowed in except Americans working for or in association with the military or other branches of the US government. Exceptions were few. Even Spanish priests who had been there for many years were allowed to remain only if they accepted American Catholic superiors (Forman 1982:15). They were swamped by up to 180 American Catholic priests and nuns, and no new non-American missionaries were allowed in. The same was true in every field of activity.[20]

A civilian (US, not Micronesian) administration took over from the Navy in 1951, but extreme restrictions were maintained. They were relaxed a little in the 1960s, but even in the 1970s it was difficult to gain entry. When it became apparent that the controls were leading to more criticism than they were worth, they were relaxed. Controls still apply today at Kwajalein which maintains "rigorous apartheid for health and education facilities" for the American staff of the US Missile Range, and next door to it the overcrowded islet of Ebeye which operates as the "segregated labour reserve" for the base, where the Marshallese live (Evans 1993:262-3). Micronesian people from all islets of Kwajalein Atoll had been forcibly relocated to Ebeye to enable the rest to be reserved for military purposes. Many others had come in from other atolls in the hope of employment or derivative income. Even to Ebeye, access is restricted.[21]

For a time the Trust Territory was administered from Hawaii, then Guam, despite criticism of administering one colony from another - particularly a military one. Most of the Northern Marianas had been closed off as it was there (secretly, and contrary to the spirit of trusteeship) that the US Central Intelligence Agency had a base to train revolutionaries (called 'nationalists' in the Newspeak of the day - as though Mao Tse Tung were anti-nationalist!) to stir a counter-revolution to prepare for a planned invasion of China. When it became apparent that an invasion would fail, the CIA base closed, the administration of the Northern Marianas was consolidated with the rest of the Trust Territory, the administrative capital of which was shifted into the

former CIA headquarters on Saipan.

The Congress of Micronesia was established in 1965, 20 years after the US takeover of the territory. It immediately began inquiry into changing the status of the Trust Territory, and continuing UN pressure eventually led to negotiations for the termination of the Trusteeship being set in motion in 1969. The negotiations began later, and protracted longer, than those of any other colonial power administering UN Trust Territories. US assertions that the choice was open to Micronesians does not fit with the evidence including a confidential document "Prepared by the High Commissioner's Development Coordinating Committee for Micronesia" and dated 26 May 1969 which listed as the first item under US 1975 Objectives for Micronesia, "Micronesia attains incorporated territory status..." [i.e. incorporated within USA]; and the first 1985 Objective for Micronesia, "Micronesia firmly established as an organized, incorporated territory of the United States, considering applying for statehood".[22]

The Fragmentation of the US Trust Territory

In the early years the US government intended to keep the six districts of the Trust Territory together as a single entity, as did the UN. But as external pressure on USA to release the territory became stronger, some interests within the US government (particularly the military, which then saw the Marianas as an important fall-back area for strategic contingencies in Asia), took increasing actions to bond the Marianas more closely to USA. In an independent or even self-governing Micronesia the Marianas people would lose the extra privileges the US government bestowed on them. U Thant, then Burma's Representative at the UN and later UN Secretary General, noted in 1961 that USA was giving the Marianas more jobs and money, higher pay, better schools with more qualified teachers, better hospitals, roads and other facilities. "This kind of discriminatory treatment" he said, "will not be conducive to development of a sense of...nationhood among the Micronesians" (quoted in Micronesia Support Committee 1982:10). That pattern continued throughout. It was not only in actions that the Marianas was treated differently, for in 1960 the Naval Administrator addressed the Saipan Legislature and spoke of it as a "separate entity apart or in isolation from the rest of the Trust Territory" and with a different political future. US administrators encouraged the Marianas to break away and join Guam as US territory (McHenry 1975:13). Although this was not US official policy - at least not acknowledged as such - it is what happened.

Saipan was a convenient territorial capital for USA owing to its proximity to Guam, but it was on the edge of the territory, thus unacceptable as a capital of a country that might emerge from the trusteeship. The Northern Marianas would almost certainly lose not only the capital, revenue, employment, privilege and power. Due to its greater exposure to US systems and culture, and the fact that they had been administered separately and much more generously because of the need to keep the Marianas people content with the CIA operation, plus the fear of being dominated by other

Micronesians, the Northern Marianas began to press for a separate Commonwealth status. One benefit for USA was their offer of land for military use on Tinian, which the US forces wanted. During World War II US forces had built on Tinian the world's largest airfield, from which the atomic bombs were dropped on Japan.

In 1969 the Congress of Micronesia rejected the offer to become a Territory like Guam and opted for independence in association with USA. In reaction, US negotiators in 1970 offered a Commonwealth status like that of Puerto Rico (including US citizenship). Micronesian leaders (except for the Northern Marianas) rejected it and insisted that sovereignty must rest with Micronesians not USA.

On 19 Feb 1971 the Mariana Islands District Legislature declared its intention to secede from the Trust Territory and seek a permanent (or at least long-term) relationship with USA. The next day the Congress of Micronesia chambers were destroyed by arson, along with other government offices, presumably by Marianas separatists (Moos 1993:14-15; McPhetres pers. comm.). The move for separation led to the adoption in 1975 of a Commonwealth status within USA which was implemented administratively from 1978 and formalized by incorporation into USA in 1986. The people became US citizens and had full rights of entry and work anywhere in USA, but retained more local government powers than they would as a part of a state (e.g. becoming part of the State of Hawaii, or a new State of the Pacific Islands including both, as their population numbers did not merit separate statehood).[23]

The Commonwealth status of the Northern Marianas gives it less autonomy than the Federated States of Micronesia (FSM) or the Marshall Islands. Nevertheless, CNMI has its own local government with some control over such matters as immigration; a very high per capita income; it belongs in its own right to the South Pacific Commission, South Pacific Games, Festival of Pacific Arts etc.; and it is subject to US oversight only in particular areas of activity such as audit, minimum wages, US revenue laws etc. In the constant balancing of the advantages and disadvantages of more autonomy or closer integration with a larger power, the leaders tend to benefit more from autonomy, but the common people often gain more from membership in a larger unit.[24]

After the Northern Marianas, with US prompting, decided to separate from the rest of the Trust Territory, USA wanted to deal with the others as a single entity. However, the Marshall Islands and Palau each demanded separate negotiations. Ethnic and linguistic differences were a factor, but also the Marshall Islands was unwilling to share the revenues it gained from the US missile range, and Palau likewise expected rents and other spin-offs if it became a fall-back base from the Philippines, as was then proposed. The remaining four districts (Yap, Chuuk, Pohnpei and later Kosrae) had little to bargain with and opted to remain together as the FSM. Unlike the Marshall Islands and Palau, they had nothing to gain economically from separation. They had declined the US proposal of 1970 to incorporate as a Commonwealth in which sovereignty would rest with USA, and US legislation would take

ment (mainly military) purposes.

Micronesians involved in the status negotiations advise that when they raised the question of constitutional independence at a later meeting in Hawaii, US presidential negotiator Hayden Williams called them aside and explained that USA would not allow constitutional independence and would frustrate any attempt to get it, to their detriment, and "pull the carpet out from under the feet" of any territorial government that insisted on it. They knew he was right, and resumed negotiations which gave USA the powers it wanted.[25]

Likewise, USA applied consistent and eventually successful pressure on Palau to change its anti-nuclear constitution.[26]

The title 'republics' was used for FSM and the Marshall Islands from 1979, although that is an unusual term for territories then controlled by USA under the UN trusteeship. The associated state relationship with USA was formally approved by the US Congress and signed into law by the President in 1986. The trusteeship was not dissolved by the UN until 1991 for the Marshall Islands and FSM, and for Palau in 1994.

The US government used every means to reduce the demand for independence and the possibility of its achievement. McHenry (1975:15) spells out the details. In short, "The full range of options might theoretically have been available, but American policy was secretly aimed at a single option - some kind of permanent association with the United States." This was the over-riding aim under both Democratic and Republican presidents. For example, in relation to later Marshall Islands negotiation, Giff Johnson reported:

> Although the United States proclaims the right of all people to self-determination, it has not applied this principle to the Marshallese. In mid April 1982 US ambassador Fred Zeder and Marshall Islands foreign secretary Tony deBrum signed a Memorandum of Understanding [which]...stated that Marshallese voters could [choose] either independence or the Compact of Free Association in a plebescite to be held on August 17, 1982. For the State Department it was an easy concession to give the Marshallese the independence option - thus satisfying the self-determination requirements of the UN - as approval of the Compact was believed certain. The Compact had been the exclusive subject of 13 years of negotiations, offering massive economic aid to a financially dependent region - the Marshallese appeared to be in no position to reject it.
>
> Or so the US negotiators believed until May 30 1982 when the Compact was formally approved by Marshall Islands President Amata Kabua, setting the stage for the August 17 vote. Opposition from Marshallese was immediate and vehement.... Suddenly rejection of the Compact appeared a real possibility, and the agreed alternative on the ballot of August 17 was independence. With lightning speed...Undersecretary of State James Buckley repudiated the agreement and canceled the August 17 vote [and] American High Commissioner Jane McCoy suspended election

> laws to prevent the Marshalls from unilaterally holding its own referendum on the Compact.... Zeder said the "Trusteeship will not be terminated until the United States says it will", a statement deBrum called "incredible" adding that it "strips the Marshallese people of any voice in their own destiny and repudiates 13 years of negotiations.
> Pentagon officials were said to be "furious because they feared the Marshallese would vote against the Compact, assume independence and then up the ante on the $1.9 million rent the US had promised to pay" for Kwajalein Missile Range....
> "...top Pentagon official Noel Koch said "declaring independence simply isn't an available option..."[27]

A new version of the Compact was signed the following year and a plebiscite held in September 1983. "This time US ballot wording won out, giving voters a yes or no choice on the Compact" (Johnson 1984:31). The vote in favor was 58%. In FSM 62% voted in favor of the Compact, including the associated state relationship and the guarantee of US funding. In view of the tremendous efforts USA directed to ensure this vote and avoid independence, it is clear that if USA had advocated and facilitated independence (as most colonial powers in the South Pacific did) it would have been achieved.

Moreover, US officials avoided "and even renounce" the term *independence* for these two states - and this included President Reagan in making the formal announcement.[28]

Negotiations over Palau were delayed because its constitution precluded nuclear activity, whereas USA wanted access for its military - nuclear or otherwise. The Palau constitution required a 75 percent vote to override the nuclear provision, even though USA promised not to "store, test, dispose of or use" toxic or radioactive weapons there (Sam McPhetres, pers. comm. 2 September 1994), but this did not preclude military use of the islands or berthing of nuclear vessels. USA kept applying pressure to get Palauans to change their minds, including withholding funds from the local government. Seven plebiscites and a number of court cases failed to make the change, nor did the assassination of the president of Palau by political opponents for motives that are still debated. With the Cold War over, USA was not likely to offer again the $447 million they offered to the 15,000 Palauans over 15 years from 1994, but with military rights over 50 years.[29]

USA gave additional 'assurances' and in 1992 Palauans voted to allow a 50% rather than 75% vote to override the nuclear provision. In November 1993 Palauans approved the Compact with USA with a vote of 68% in favor. This was approved by the US Congress in 1994 and the UN Trusteeship was dissolved. US rights to Micronesian land and water (both constitutional and negotiated) remain substantial, but they have shrunk significantly since 1968.

The Post-war Quest for More South Pacific Bases

At the end of World War II, USA wanted to take sovereignty of Manus Island (in PNG), Guadalcanal (Solomon Islands), Espiritu Santo (New Hebrides, now Vanuatu), part of New Caledonia, Christmas Island and Kanton (Kiribati), and Funafuti (Tuvalu). In the aftermath of war and with their vulnerability to attack having been so vividly demonstrated, the Americans would have been welcome in many cases. The Tarawa people, who saw some of the worst Japanese brutality, petitioned the Americans not to leave. Australia, New Zealand and UK would not allow US sovereignty (and I assume France would not for New Caledonia), but were agreeable to USA having bases in those islands, in return for a security pact between the four metropolitan countries. This was not acceptable to USA, despite many attempts to find a solution.[30]

The Process of Losing Land and Sovereignty

Reclaiming One's Own Territory from USA. Irritating relations with several countries for some years was the fact that USA claimed that parts of Kiribati, Tuvalu, the Cook Islands and Tokelau, were American territory. The origin of this audacious pretension, which arose out of the last imperial expansion in the region, was discussed above (pages 23 - 24). Most Cook Islanders never knew that USA claimed to own four of the islands they had lived on for 1,000 years; nor did most Tokelauans know that USA claimed to own all of their territory; nor the people of Tuvalu that USA claimed four of its nine islands, including the capital of Funafuti! While most Pacific Islanders did not know of the US claims, some did, for American maps showed those places as US territory. Although the Pacific Islands were a non-issue for most US legislators, some conservative senators and congressmen fought in the 1970s for continued assertion of the claims. Despite US rhetorical support for democracy and the sovereignty of nations, it took until 1978 to mobilize enough support in the US administration to recognize the sovereignty of Pacific people who had made their choice clear.

The draft treaties, however, had no validity until passed by the US Senate, which was very reluctant to act on them. A speech by Lance Adams-Schneider (New Zealand ambassador to USA) who spent a year lobbying the issue, was credited (by Lelaulu 1983:2) with being the "last straw" which led to ratification by the Senate in 1983. Ambassador Adams-Schneider noted that one of the most serious problems in the "at times troubled" relations between USA and the Pacific Islands, was:

> "the reluctance of some people in the United States to withdraw an outdated colonial claim to 25 islands in four Pacific countries. It never administered any of them. Nor has it borne any of the responsibility for the upkeep, for the development of responsible government or for the welfare of the people. Moreover these claims have not been recognized by any other country. These claims cannot be sustained under international law, and were they ever to be the subject of international adjudication the only

possible outcome would be their complete rejection." (Adams-Schneider 1983:29-30).

The Kiribati case was more complex. The Phoenix and Line Islands became, in 1917, part of the Gilbert and Ellice Islands Colony administered by the UK. USA laid no claim to them. Kanton Island in the Phoenix Group was, however, in the right location for refuelling the air service proposed by Pan American in the 1930s. So USA used ships logs from the previous century to claim Kanton and 13 other Phoenix and Line Islands. The claim was spurious, but to avoid conflict over a minor issue, and to facilitate air services to Fiji, New Zealand and Australia, the UK allowed USA joint rights to Kanton.

Australia, New Zealand and UK tried for some years to persuade USA to drop these claims that had no validity in law or on any other criterion. USA could have been challenged in the International Court of Justice in The Hague, but it was considered too small an issue for such a major exercise. For a time the New Zealand Minister of Foreign Affairs asked his embassy staff around the world to keep prodding American embassy personnel in the hope of embarrassing USA into relinquishing the claims, by reminding them that USA was rhetorically anti-colonial, but in relation to its own interests very colonial. It had no effect.

The US government realized it would have to relinquish the claims, but also that they were a bargaining chip with which USA could gain concessions from islands governments. Tuvalu became independent in 1978 and learned only shortly before that the world's most powerful country would only relinquish its hypocritical claim to half its territory, in return for concessions. Tuvalu could not afford to join the UN. It wanted harmonious relations with other countries, and it wanted to be free of claims by foreign powers.

USA sent a skilled international negotiator, Mr William Bodde, to negotiate with Prime Minister Toalipi Lauti of Tuvalu, who until the previous year had been a welfare officer and teacher, and had no experience in international negotiating. Tuvaluans had a positive image of USA, and believed Mr Bodde's claim that he was trying to help Tuvalu. The US proposals were accepted in principle. Fortunately for Pacific Islanders, before anything could be signed, other countries heard of the concessions that had been wrung from Tuvalu. The Prime Minister of Fiji (Ratu Sir Kamisese Mara) informed his counterpart in Tuvalu that the powers he had been persuaded to surrender to USA in order to get the claims lifted, left not only his, but neighboring countries in a weak position. Once Tuvalu understood the consequences of the US deal, and was encouraged to resist being bullied into accepting it, the deal was changed.

In the final treaty, in return for the withdrawal of US claims, Tuvalu agreed to consult USA on any proposed military use of Tuvalu by any country, and to consult on US requests for the use of Tuvalu territory in times of "international crisis". There was an implied but not explicit understanding that USA would provide aid to Tuvalu.

The treaty with Kiribati had similar provisions, but conceded joint use of the airport on Kanton to USA for a minimum of ten years. Kiribati under-

took to give 'sympathetic consideration' to US fishing vessels applying for fishing licenses in Kiribati waters to supply canneries in American Samoa.

The treaties with the Cook Islands and Tokelau were negotiated the following year, by which time there was widespread feeling among Pacific governments that no concessions should have been asked or given. The problem for the islands states was that USA threatened not to withdraw its claims without concessions, particularly in the form of strategic denial. So Kiribati and Tuvalu yielded to signing Treaties of Friendship, though forced marriages may have been a more accurate term, as they did not have the funds to contest the issue at the International Court of Justice. However, the Cook Islands and Tokelau negotiators refused any concessions, and would not allow the agreement to be entitled "Friendship and Territorial Sovereignty". They insisted on noting that the US claims were not recognized - lest it imply that the USA ever had any rights. The treaties with them noted that the countries agreed on boundaries with American Samoa, and would cooperate in `promoting social and economic development' and `the advancement of the South Pacific region'.[31]

An interesting side issue in the last two negotiations was that, having heard that the negotiations with the Cook Islands would be tougher, the US negotiator asked Governor Peter Coleman of American Samoa, who was a friend of Prime Minister Sir Tom Davis of the Cook Islands, to accompany him. This use of American Samoa (and sometimes Hawaii) as a 'front' for US interests in the region has been moderately useful to USA in some dealings with Polynesia, though not much beyond.[32]

Current Problems of Military Land: Ownership and Value. The "most difficult issue" between USA and the Micronesian countries became "US military use or potential future use of island land" (Dorrance 1992:12). The transfer of land to foreigners has been one of the most widespread causes of misunderstanding and resentment throughout the Pacific region. During war, people have no alternative but to accept the sudden takeover of land for military purposes, and in World War II were generally happy to provide land, particularly in view of Japanese brutality. Promises of appropriate compensation after the war, took decades to settle in Micronesia, and in many places are still bitterly contested. Moreover, after the war, US forces compulsorily acquired large additional lands in Guam in case they were needed in future, but most remain unused. Compulsory acquisition and the holding of land by the military beyond essential need has caused friction on Guam and Hawaii for nearly a century. The US military is making further assessments and aims to return more land.

The nation-wide reduction of military bases by the Base Closure and Realignment Commission includes the Naval Air Station on Guam, Barbers Point Naval Air Station in Hawaii, and the Naval Station on Midway Island. Some people on Guam want the Naval Air Station service retained, owing to the employment and income it generates, but to operate from Anderson Air Force Base so that the land it now occupies can be returned. In January 1994,

US Congress Resolution 2144 returned 3,200 acres of the land confiscated by the military after World War II (and which has been a matter of contention ever since), to the government of Guam. The military has designated an additional 24,000 acres as surplus to its needs, so this irritant in the relationship with Washington is likely to fade away. Instead, it is becoming a matter of contention between the original landowners and the government of Guam.[33]

The latest major military lease, that for 9,600 acres on Tinian in CNMI, was for 50 years from 1984. By the time of signing the military had decided it did not need it, but local beneficiaries insisted that the lease go through. In 1994, some 1,500 acres of it was handed to the CNMI government for tourism development. The Air Force radar station has been closed and the land handed to the CNMI government, and there is talk of more military land being handed to Voice of America for a transmitter station. However, the US Navy is demanding refund of the $2 million in rent for the land returned.

Giving Other People's Territory Away. West New Guinea was a colony of the Netherlands, but was scheduled for independence in 1970. The decolonization process was proceeding according to plan in the early 1960s, when Indonesia stepped up its campaign to acquire the territory. USA had been active in Indonesia, and in 1958 backed Sumatra and Suluwesi rebels through the CIA against the left-leaning central government. This did not succeed and Indonesia continued its leftward course. June Verrier (1976:140-1) notes the shift in the US position during the presidency of John F. Kennedy, in order to cultivate the newly independent states of Asia and Africa. This gave Indonesia leverage:

> USA hoped that by playing the Irian [West New Guinea] card to guide Indonesia away from the communist camp. This was also considered an advantage for anti-communist forces elsewhere in Southeast Asia (Gerrit Knaap, pers. comm. 28 Mar 1995).

West New Guinea was believed, rightly, to have vast and rich mineral potential. The rights and interests of the one million Melanesians there were ignored, and USA agreed to facilitate an Indonesian takeover of the territory. This gave Indonesia the 'green light' to invade West New Guinea and, with the support of Australia, the Netherlands was pressured to withdraw. Indonesia renamed it Irian Jaya. The war of independence by Melanesian people against Indonesian control has been fought ever since, against terrible odds, and has resulted in the killing of tens if not hundreds of thousands of Melanesian people.

USA and Australia likewise connived in the takeover of East Timor by Indonesia in 1976, where another war of independence continues to be waged by the Melanesian people, and where one third of the indigenous people are estimated to have been killed by Indonesian forces.[34]

The Irian Jaya and East Timor examples taught those Pacific Islands people who were aware of what was going on that big powers - not only Indonesia but also USA and Australia - could make callous decisions with

Pacific peoples' land and lives if they thought it was in the big country interest to do so.

Private Land Purchases

American Land-buying in the Pacific Islands. In the 1970s, Fiji and the New Hebrides (now Vanuatu) allowed speculation in freehold land. Most Pacific Islands nations did not, and even in those two, native land was not saleable.

In Fiji, the plantations acquired by British settlers last century were becoming uneconomic. Many of the owners were migrating to Australia or to towns in Fiji. From the late 1960s Robert Hunter and other American real estate entrepreneurs bought whole islands. Naitauba was sold to US actor Raymond Burr, who later sold it to the US Johannine Daist Communion movement which still occupies it (and from which emanate titillating tales of free love and other interesting privileges for the high priest). Laucala Island was sold to Malcolm Forbes of *Forbes* Magazine, who used to visit in his private plane "Capitalist Tool". Wakaya Island, Turtle Island and several others were sold (or in some cases leased) to American operators who established exclusive `boutique' resorts, catering mainly to a wealthy American clientele.

Devo Plantation was sold to a group of American psychologists who established a commune for harmonious living, but it disintegrated in chaos. Soqulu was one of several plantations acquired with the intention of building retirement communities for wealthy Americans. Due to the changing political climate, none of the communities materialized, for the advertising of these properties, and the sales of them to outsiders, raised the level of Fijian claims to have them returned to the tribes which had sold them. Many claimed that the original sales had been under false pretenses, for inadequate payment or through misunderstanding of the terms. Moreover, the Fijian population was rising rapidly and Fijian nationalism becoming more assertive. Some claimants went surreptitiously to plantations taken over by Americans and destroyed their fences, buildings or crops.

By the 1980s the sales were few and far between, and in 1994 Kaibu Island, which American inventor Jay Johnson bought from a local family 20 years ago, had been on the market for two years at US$10 million. The only interest Johnson referred to in a recent interview (*The Review* Feb 1994:45) was from Japan. Gordon Oliver, also American, retains minor holdings at Pacific Harbour and elsewhere, and a few Americans own retirement homes or plantations.

The other major case of land sale to Americans was Vanuatu. This is not dealt with here because no land was developed (though massive profits were), but in chapter 4 under the heading "Criminals, conmen and carpetbaggers". At independence, all freehold land was required to be returned to the original owners from whom it had been acquired last century. In some cases the expatriate owners were allowed to lease the land they had formerly owned, but as the main US land developers and French settlers were involved

in the rebellion against the government, they were not allowed to retain any rights. American interests in land in Vanuatu today, as in Solomon Islands and PNG, are minimal.

In Western Samoa, the US firm Samoa Tropical Products owns plantations for the production of coconut cream. It is the only US owned land there that I am aware of. It is against the law for any land to be sold in the Cook Islands. Leases for 60 years are the maximum term permissible. The main islands of Rarotonga and Aitutaki are attractive, but very small. American and other wealthy individuals acquiring leases for retirement homes or holiday cottages pushing lease prices up so far that it became difficult for indigenous people to lease for home building, so the government restricted leases to non-Cook Islanders unless they were going to invest in employment-generating industries or other approved activities.

Americans purchased property in Tahiti and neighboring islands, especially after Marlon Brando bought the island of Tetiaroa. Some was for retirement or holidays, some for hotels and other enterprises. I do not have accurate data but am told that Americans have in recent years been selling more property there than buying it.

In Guam, as Americans sell, Asians buy. In the Northern Marianas, non-Micronesians are prohibited by law from acquiring the fee (i.e. freehold) but leases up to 55 years and other processes allow effective foreign control of some land. Here again American landholding has diminished while Asian has grown. This pattern is likely to become general throughout Micronesia.

In the Marshall Islands, US investors claimed to have acquired rights to the atolls of Taongi and Bikar for 55 years in a joint arrangement with their high chief. Admiralty Pacific, a waste disposal company of Seattle, proposed to dispose millions of tons of solid waste there from USA - claiming it would more than double the usable land area of the Marshall Islands. Hotels, golf courses and other facilities were to be built. However, the islands are small, storm waves wash over them, there is almost no water, and even normal household garbage is toxic (as it includes batteries, disinfectants etc.). Following protests from Greenpeace and other environmental groups, and from some Marshallese with rights on the islands, action was postponed. Other Marshallese, including President Kabua, favor these schemes, believing that financial and other benefits outweigh costs.[35]

To get away from homosexuals, Jews, Blacks and various others, Smiley Ratcliffe of Frog Level, Virginia, decided in 1980 to buy uninhabited Henderson Island. That is about as far as you can get away from anyone in this world! The UK government, which owns Henderson, was about to agree to the offer of a million dollars for a long-term lease, and the Pitcairn Islanders were enthusiastic, because Ratcliffe promised to build an airstrip and provide a ferry service to isolated Pitcairn 100 miles away. Then environmentalists raised the alarm around the world and Henderson was left to its pristine tranquility.

Rising populations, increasing political resistance to the sale or lease of land to outsiders, and reduced disposable income of Americans, have meant

that the 1970s surge of American interest in property in the Pacific has shrunk. The October 1993 edition of the California journal *Islands*, probably the main US advertiser of islands properties around the world, included only four from the Pacific. All related to property in Fiji - a 48 acre island, some one acre beach lots, a dive resort, and a general advertisement by a Fiji Indian real estate agent. American interest in land in the Pacific Islands is at its lowest ebb ever.[36]

The retreat of Americans continues into Hawaii and California, where large amounts of real estate have been bought by investors from Japan, Taiwan, Hong Kong, Korea and Southeast Asia. In Hawaii, over 70% of the quality hotels are owned in Tokyo alone.[37]

Pacific Islanders Acquiring Land in USA

A considerable amount of land is likely to be returned to Hawaiians and to Chamorro people and institutions in Guam and CNMI by the US military and other branches of government. Some federal lands have been targeted for resort development by Chamorro claimants. The state of Hawaii and the territorial government of Guam have also returned some lands held at those levels of government, and are likely to return more. Hawaiians, Chamorros and Samoans are buying land on the US mainland. Sam McPhetres advises that many Chamorros own land on the West Coast of USA, and that it is a point of contention in CNMI that other Americans are denied by law the reciprocal right to buy land there.

The government of Nauru has made substantial investments in urban land in USA (chapter 4). For other Pacific Islands, however, land buying in USA seems to be mainly a family matter. The largest category is the Samoans and Tongans who have settled in USA, though a few who remain at home own properties in Hawaii or California. Many Tahitians, particularly Chinese-Tahitians, bought properties in California. The fifth largest buyers of real estate in Hawaii are French citizens, but most of these are understood to be French Polynesians, and a smaller number New Caledonians.[38]

The category that is likely to become bigger is Micronesians - especially those Marshallese who have large incomes from rent or compensation from the US military. The people moving to USA from the FSM will want to establish homes, and some businesses. Pacific Islanders have an enormous penchant for buying land for churches. When even a relatively small community establishes, they want their own community church, and land for that purpose often gets priority over home-buying.

Being recent immigrants, many Pacific Islands people in USA are unable to buy and must rent for a time at least. And being new to the techniques of real estate agents, they need to be careful - as illustrated by the Green Valley Acres scam which deprived so many Tuvaluans of their life savings (see page 87).

Changing Powers Over Ocean and Air Space

Formal rights to water were confined to the six mile, and for some countries twelve mile, territorial sea until the UN Law of the Sea (LOS) was drafted. The rest was international water. What mattered for practical purposes was who had the naval power to control it. No Pacific Islands country had such power, so effective control was determined by the European-derived powers, and in this century Japan as well.

Even before the LOS came into force, most Pacific Islands countries passed laws in the late 1970s, claiming the 200 mile EEZs around their islands. Archipelagic rights under the LOS allow the compact islands nations (where the ratio of land to water is 1:9 or more, such as Fiji) to claim considerably more. More scattered nations like Kiribati, however, do not qualify and for this reason did not accept it for some years. Their own law gave them rights to all waters between their widely scattered islands.

USA did not accept the LOS until 1994, which impeded relations with Pacific Islands nations. Nor did it recognize their 200 mile zones even though in 1975 it declared its own 200 mile fisheries zone. In 1986, leverage was applied to get USA to agree to respect most of its provisions (see pages 114, 278). USA has lost the 200 mile zones around the FSM, the Marshall Islands, Palau and Ogasawara; and its claims to those around CNMI, Guam, American Samoa, Hawaii, Johnston Island and Wake are being challenged.[39]

Air rights were not an issue when Pan American pioneered services across the Pacific in the 1930s. They have become so since. There are some areas of minor friction - for example, Fiji claimed that US Air Force planes should pay the same rates that other aircraft pay when flying through its air traffic control zone, but USA rejects this (see page 127). The five countries of the Small Islands States group are exploring the possibility of extracting value from the use of their air space. This is opposed by USA and others as inconceivable, but so was the LOS concept a generation or two ago. In contrast, USA gave tacit support to Tonga's claim to slots in space for communications satellites as it was done by US entrepreneurs, so the Tongan rights are merely a technicality to enable US entrepreneurs to obtain more telecommunications control than they could get under US rights (see pages 62, 91).

Conclusion

The US expansion phase is over and the shrinkage phase has begun. The Philippines became independent in 1946. Ogasawara, Kazan Retto and Minami Tori Shima were returned to Japan in 1968, and Okinawa in 1972. The loss of islands retained under the Guano Act reached its present lowest ebb in 1978, though some of the remaining islands may also be lost to US control in the coming years. International pressure, economic constraints and Micronesian demands led to the loss of the Trust Territory. The US military is again reviewing its land needs because of budget cuts and pressure for its return (see chapter 14).

In private land, the fact that Americans are disposing of properties does not necessarily mean that Pacific Islanders are acquiring them. In many

places Japanese and other Asian investors are replacing American. Nevertheless, South Pacific Islanders already own more land in USA than Americans do in the South Pacific. That is also likely to be true for the North Pacific Islands within a decade or two. Indigenous Hawaiians are claiming more land rights (and considerable success in acquiring them), and substantial sales of freehold land in the 1970s and 1980s to investors from East Asia.

Humans do not give up property, possessions, powers or privileges easily. Some people have suggested that Americans might be less possessive of territory because they acquired it so recently, but these are innate tendencies rather than national ones. For example I was chatting with Bob Textor, a distinguished American academic who is totally committed to peace, justice and humanitarian, international, non-ethnic, non-national, world causes, and mentioned my expectation that Hawaii would be constitutionally separate from USA by the end of the first quarter of next century. He was amazed and thrown automatically into a defensive posture: "I find it shocking. It reaches deep within my fundamental American loyalty. Once before some states of USA tried to secede and 600,000 men were killed settling that issue. That issue is considered settled." This kind of view has been the norm in every colonial power, for the dominant perception of those with power anywhere is of its legitimacy, beneficence and durability. Only at a late stage in the transition does the inevitability become accepted. The pressures, both from Hawaiians and from Asians once common interests increase, are likely to become strong enough to lead to changes in Hawaii too.[40]

The main phases of expansion and contraction discussed in this chapter are reflected in concurrent phases of expansion and contraction in other aspects of interaction between USA and the Pacific Islands.

Notes

[1] For information on traditional Pacific Islands land tenures see Crocombe 1974, 1991, 1994; for notions of sovereignty see Ghai 1988, Ghai and Cottrell 1990, Larmour 1992, Powles and Pulea 1988.

[2] Likewise Gibson (1993:37) says that by 1900 USA was "the Basin's dominant power, its supremacy due in large measure to the earnest application by its frontiersmen of those familiar expansion processes by which, in scarcely half a century, this aggressive young nation had absorbed much of the North American heartland."

[3] For the takeovers within Melanesia of Irian Jaya and East Timor, see pages 38 - 39 below.

[4] The most comprehensive account of the acquisition of guano islands is in O'Donnell (1993).

[5] For information on Midway and Wake see Bryan 1942, Dahl 1991, *Encyclopedia Britannica*, *Pacific Islands Year Book*, US Department of the Interior 1991, Weins 1962.

[6] For information on Palmyra see Note 5 above. A bizarre case of piracy occurred there in 1974. An American on a dilapidated yacht forced the man on a luxury yacht to 'walk the plank' into shark-infested waters, murdered his wife and stole the yacht. He was convicted of murder in Honolulu. The saga gave extensive media coverage to Palmyra and raised again the questions of claims to it. *The Pacific Islands Yearbook* (1989:315-6) sums up the story. It is also the subject of a documentary film "And the Sea Shall Tell". The information on current plans was provided by Mr Bill Bow of Savio Realty.

[7] This account is summarized from Cholmondeley 1915; *Encyclopedia Britannica;* Gast 1944; Japan National Tourist Organization 1991; Oda, 1990; Office of the Chief of Naval Operations 1944; and Sheridan 1979. USA retained most conquered islands nevertheless.

[8] For the Tokelau claim see Hooper 1975. As noted in chapter 15, the claim is still a matter of contention. Sometimes spelt Olohenga.

[9] For the history of US involvement with Baker, Howland, Jarvis, Kingman and Johnston Islands see Note 5 above. Other islands claimed under the Guano Act were in Tuvalu, the Cook Islands, Tokelau, and Kiribati (the Gilbert Islands), which USA would not relinquish until pressure from the region made it in US interest to do so, as discussed below (pages 35 - 38).

[10] The history of US involvement in Hawaii has been extensively documented. The 'classics' include Kuykendall's massive work of 1976, Daws 1974, Grattan 1963a,b, Michener 1961, Price 1963, and various others. Each author naturally has a different perspective, but published perceptions by Hawaiians are only recent and contain significant differences of emphasis - see e.g. Kame'eleihiwa 1992, 1993, McGregor 1994, Trask 1984, 1993. A recent film by Puhipau and Joan Landers entitled *Act of War: The Overthrow of the Hawaiian Nation*, presents another Hawaiian view. The US official position is becoming more understanding of the Hawaiian view. For recent and possible future changes, see chapters 13-15.

[11] For details of US landownership in Hawaii see e.g. Kame'eleihiwa 1992, Meller 1991. For land as a factor in recent Hawaii political economy see Cooper and Daws 1991.

[12] For a history of Guam see Carano and Sanchez 1964.

[13] For a summary of the acquisition see Kiste 1994:245. For a fuller account see Michal 1992.

[14] New Zealand took Western Samoa at the outbreak of World War I in 1914. In 1962 it became the Independent State of Western Samoa. US involvement in Samoan history is recorded by Gilson (1970), Davidson (1967), Masterman 1934, 1980 (chapter 7), Kennedy (1970) and others. Gray (1960) deals with the naval administration of American Samoa.

[15] For the German-Spanish deal of 1885 which protected US interests see Hezel (1983:306-13). For US frustration over the deal of 1898 see Farrell (1992:3-12). Petersen reiterates the same point, noting that "American interest in controlling Micronesia" is not a post-World War II phenomenon and that "US set its sights on Micronesian harbors well before the First World War" (Petersen 1993, citing Miller 1991). The Japanese takeover was part of a secret deal whereby the UK, Australia and New Zealand took the German colonies south of the equator. USA refused to recognize the Japanese claim to Micronesia until 1922, partly due to US insistence on recognition of its strategic communications interests.

[16] Administering governments were to report annually to the Mandates Commission, but that

did not result in much pressure for change. In 1937 Japan stopped reporting at all.

[17] Solomon, Anthony, 1963. The first expose of the Solomon Report was undertaken by the Friends of Micronesia, and entitled *The Solomon Report: America's Ruthless Blueprint for the Assimilation of Micronesia*. See also Anonymous 1971. Excerpts are also reprinted in McHenry 1975 Appendix 1, and in *Micronitor* 10 July 1971.

[18] Rapanui has its own provincial government within Chile even though it has only 2,000 people, and its per capita income exceeds the national average. People of the French Pacific territories likewise are citizens of France, and their incomes average 11 times more than the independent Pacific Islands nations. In Micronesia as elsewhere, the people willingly accepted more formal education, health and other services, as well as employment and other income.

[19] Ballendorf 1991:82. Ballendorf was Peace Corps Director for Micronesia, then Director of the Micronesian Area Research Center, and now a professor at the University of Guam.

[20] I was invited by the US Trust Territory administration for consultations on land tenure in 1967 and 1971. Both visits required security clearances. Even Americans (other than officials, carefully selected American researchers and short-term tourists) needed them. For an official history of this period see Richard 1978.

[21] Improvements have been made in recent years, though the crowding is still intense. In 1975 McHenry (1975:61) described Ebeye as "an over-crowded and disgusting slum" and quoted an American official saying "The stench is so bad you can hardly walk the street." Such criticisms are not isolated or unrepresentative. There have been constant adverse comments from many sources contrasting the depressed conditions on Ebeye with the privileged conditions for Americans on the adjacent base on Kwajalein. The parsimony in providing for the Marshallese is usually compared with the fact that USA has been able to afford billions of dollars for the missile range and its research program. Not only Americans look after their own interests - the extent to which some highly privileged Marshallese have done so in relation to allocating benefits from the American presence, is at least as serious.

[22] The confidential document of 26 May 1969 I have in my possession. I am not aware that it has been released publicly. The High Commissioner was the top US official in Micronesia and a presidential appointee. For the evolution of the Congress, see Meller 1969; for later constitutional developments see McHenry 1975, Meller 1985.

[23] The Commonwealth status was supported by 78.8% of the electorate. The first constitutional government of the CNMI was instituted in 1978. CNMI residents gained US citizenship on 4 Nov 1986, when Commonwealth status was implemented. A US federal negotiator represents the US Secretary of the Interior to work out issues between USA and CNMI governments.

[24] See e.g. McPhetres (1992), who notes the constant ambivalence which leads, for example, to CNMI objecting to US building codes, but then demanding US disaster relief when buildings are destroyed by hurricanes because they were not built to the right standard.

[25] Personal communication from Micronesian negotiators. Official US actions to avoid the independence option are outlined by Johnson (1984:30). The Micronesian Support Committee (1982:6) quotes US Secretary of Defense James Schlesinger as saying that the purpose of the continuing political status talks was "only to change the form of [trusteeship] agreement while

retaining the basic objective and responsibilities we have had for nearly thirty years", and that "our sources of Asian raw materials can be controlled from Micronesia.... In the strong sense of the word, the US must remain a Pacific power." The ostensibly political negotiating team was dominated by Defense Department staff who were "instructed not to discuss independence with the Micronesians during this period" (Micronesian Support Committee 1982:6). The top two posts in the US Office of Micronesian Status Negotiations were held by military officers.

[26] This saga is extensively documented over more than a decade by *South Pacific News Bulletin, Islands Business,* and other journals, and by Smith 1991.

[27] Johnson (1984:30-32). Charles Lichtenstein, former US ambassador to the UN told me in Washington in Sept 1994 that he handled Micronesian affairs with the UN Trusteeship Council and the US interest was overwhelmingly in protecting its military interests. See also McHenry (1975:86 and Kiste 1994:232).

[28] Michal 1993:318-9. The Trusteeship was formally terminated by the UN Security Council in 1991 (UN Dept of Public Information 1992:4). USA did not want it to go to the Security Council earlier, as USSR would probably have vetoed it. For practical purposes the associated state relationship became effective from 1986.

[29] McPhetres advises that USA offered to reduce the military rights to 15 years in return for reduced funds, but this was rejected. Having had its economy eroded and dependency so cultivated during 40 years of US administration, following equally effective subordination of a different kind under Japan, Palauans had little choice but continued dependence. Only indigenous Palauans are eligible for such funds.

[30] McIntyre 1988: 132 - 40; Hayes et al 1986: 23 - 6; Donald Johnson 1076: 273.

[31] For details of the treaties see *Treaties and Other International Acts*, US Government Printing Office, Washington as follows; "Friendship and Territorial Sovereignty: Treaty between USA and Tuvalu", Series 10776, 7 Feb 1979; "Friendship and Territorial Sovereignty: Treaty...between USA and Kiribati", Series 10777, 20 Sept 1979; "Maritime Boundaries: Treaty between USA and the Cook Islands", Series 10774, 11 June 1980; "Maritime Boundaries - Tokelau: Treaty between USA and New Zealand", Series 10775, 2 Dec 1980.

[32] Fred Radewagen, who worked for six years for the US government on Micronesia and American Samoa, who has since been the official representative in Washington for three Pacific Islands governments, and who is proprietor and editor of the *Washington Pacific Report*, says "I have tried without much success over the years to get Washington to see what a valuable diplomatic asset they have in Islander Americans, who ought to be more integrated into US decision-making" (pers. comm. 16 Dec 1994). I agree, provided it is in order to seek their guidance rather than, as was felt in this case, US officials wanted a Pacific Islander to facilitate the acceptance of their predetermined goals.

[33] "The enemy is our leaders" says one spokesperson for the landowners, who refers to the government of Guam as a "bigger thief" than the US government (*Pacific Islands Monthly* Apr 1994:58). As some of it is used for highways, schools, public parks etc., it cannot all be returned. There is much debate about the rest, about compensation, and about usage. The Audubon Society and the US Department of the Interior want much of the land to be declared a wildlife reserve.

[34] For the Indonesian takeover of Irian Jaya and East Timor and the US role see e.g. Budiardjo and Liong 1984 and 1988, Committee on Foreign Relations 1992, Ramos-Horta 1987, Savage 1982, Taylor 1991, Turner 1992. I am also indebted to Sjoerd Jaarsma, Gerrit Knaap, Toon van Meijl, Grant McCall, Hank Nelson and Paul van der Veur for data on this issue.

[35] "Pacific Landfill...", a report by Admiralty Pacific, Seattle, May 1988, *Marshall Islands Journal* 2 Sept 1988. Another US investor group claimed to have a similar joint deal with the chief of Taongi to develop resort facilities there. I am grateful to Larry Hamilton for details.

[36] There is still some market. *The Pacific Magazine* of Honolulu in 1993 carried advertisements from two Hawaii real estate firms - one for "estates, resorts, islands, and endless opportunities" in the Pacific Islands; and the other for similar resources in Melanesia and Micronesia.

[37] Nic Ordway, Director, Hawaii Real Estate Center, University of Hawaii, pers. comm. Nov 1993.

[38] The Vice Consul-General of France in Hawaii said he was surprised to see the statistics on French property ownership in Hawaii, until he discovered that it was largely because of Tahitians and others from French Polynesia, of whom there are about 1,000 in Hawaii.

[39] With Republicans controlling the Congress from late 1994, US ratification of the LOS Treaty is again in doubt - Fred Radewagen, pers. comm. 16 Dec 1994.

[40] All those who kindly read this book in draft gave helpful, supportive comments and criticisms, logically and without emotion. The only exception was in relation to potential loss of territory. Non-American readers did not find this surprising, but most American readers reacted with emotion and sometimes anger and hostility at the thought of mentioning the possibility of a non-American Hawaii. The same reaction was apparent in recent decades among the peoples of other imperial powers towards possible loss of territory as the decolonizing process proceeded. The phenomenon is manifest even more strongly in Japan than in USA.

Annex 47

J. BOND AND R. MEYER DE SCHAUENSEE, "THE BIRDS", *THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA, MONOGRAPHS*, NUMBER 6, RESULTS OF THE FIFTH GEORGE VANDERBILT EXPEDITION (1941), WICKERSHAM PRINTING COMPANY, 1944

THE
ACADEMY OF NATURAL SCIENCES
OF PHILADELPHIA
Founded 1812

MONOGRAPHS
Number 6

RESULTS OF
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(BAHAMAS, CARIBBEAN SEA, PANAMA,
GALÁPAGOS ARCHIPELAGO AND
MEXICAN PACIFIC ISLANDS)

PHILADELPHIA
1944

THE BIRDS

by James Bond and Rodolphe Meyer de Schauensee
Department of Birds, The Academy of Natural Sciences of Philadelphia

A. Some Birds of the Southern Bahama Islands

The first islands on which bird collections were made by the Vanderbilts on their 1941 expedition were Little Inagua, West Caicos, and Providenciales situated in the southern Bahamas. These islands were virtually unknown from an ornithological standpoint. They were visited in 1930 by Dr. Paul Bartsch of the United States National Museum, but no report on the birds obtained has yet been published. The Caicos Islands were explored by Cory's collectors many years ago, but no birds were recorded from Providenciales.

Specimens were obtained by the Academy's expedition at Little Inagua on March 8 and 9, 1941. Dawson Feathers, Vanderbilt's collector, writes that this island is extremely low, attaining a height of not more than 50 feet above sea level. It is covered with a dense growth of "cacti, yuccas, and thorny creepers." As in the case of Great Inagua, a considerable number of wild donkeys exist on Little Inagua. No human habitation was apparent.

The expedition was ashore on West Caicos on March 10 and 11. The vegetation is quite similar to that on Little Inagua, but the island attains a height of approximately 100 feet. Inland were found two large lakes of brackish water, each covering some four to six square miles. One of these was very shallow, the other was in places from six to ten feet in depth. Both were crossed by an ancient causeway, on which were the remains of a narrow gauge railway. There had obviously been a salt works here many years ago. Again no signs of human habitation was noted.

On March 12, 13, and 14, Providenciales was investigated. The island is considerably higher than the previous two (about 300 feet) and vegetation was found to be more luxuriant. In places trees attained a height of some twenty feet. Some tidewater inlets, bordered by mangroves, were noted and an effort was made to penetrate into the interior by means of these, unfortunately without success.

The avifauna of the Bahama Islands is by no means rich, the Inagua and Caicos Islands not excepted. It is therefore not surprising that few species were encountered. Nevertheless, a number of the birds that were collected are of considerable ornithological interest.

Annotated List

Phaëthon species

What were presumably Yellow-billed Tropic-birds (*Ph. lepturus catesbyi*) were noted at Providenciales.

Pelecanus occidentalis subspecies

Brown Pelicans were seen at Providenciales, but no specimens were collected. They are probably referable to the nominate form, which is widely distributed among the Greater Antilles.

Ardea herodias subspecies

One observed on West Caicos, another on Providenciales.

Nyroca affinis (Eyton)

Three ducks (apparently this species) were flushed from a lake on West Caicos.

Pandion haliaetus ridgwayi Maynard

♀, o; Little Inagua.

The Bahaman Osprey was also noted on West Caicos and Providenciales. A nest was found on Little Inagua.

Haematopus ostralegus prattii Maynard

♂, o; Little Inagua.

The two specimens collected are typical of this race, which has the distal portion of the bill, decidedly thicker, less blade-like, than in *appliatus* of the mainland coast.

Charadrius wilsonia wilsonia Ord

♂, ♀; Little Inagua.

These two skins are indistinguishable from a series in the Academy's collection from the coast of the southeastern United States.

"Plover" were also observed on West Caicos.

Erolia minutilla (Vieillot)

o; West Caicos.

Columba leucocephala Linnaeus

A "pigeon", presumably this species, was seen on Little Inagua.

Columbigallina passerina exigua Riley

2 ♂; Little Inagua. 2 ♂, 4 ♀, o; West Caicos. 2 ♂; Providenciales.

We find that specimens from the Inagua, Caicos, and Turk Islands are virtually indistinguishable from those from Mona Island near Puerto Rico, the type locality of *exigua* (cf. Bond, Proc. Acad. Nat. Sci., Phila., vol. 94, 1942, p. 95).

Wing measurements (in millimeters) of the above series are as follows: ♂ Little Inagua, 80 (2); West Caicos, 77.25-78.25; Providenciales, 77.5-78.75. ♀ West Caicos, 77.5-80.5.

Calliphlox evelynae salita (Greenway)

3 o; West Caicos (1), Providenciales (2).

These specimens are apparently females. They are more extensively white below (i.e. on the posterior under parts) than females from Great Inagua and Little Inagua, a difference pointed out by Greenway when he described *salita*.

Calliphlox evelynae lyrura (Gould)

♂, 2 ♀; Little Inagua.

All three examples are beautiful adult specimens. Both sexes agree perfectly with recently collected specimens from Great Inagua, and show no approach to *salita*. The purple frontal band in the male is very broad, extending well back onto the fore-part of the pileum.

The genus "*Nesophlox*" Ridgway has been recently merged with *Calliphlox* Boie (cf. Todd, Ann. Carnegie Mus., vol. 29, 1942, p. 357).

Megaceryle alcyon alcyon (Linnaeus)

Seen on Providenciales.

Mimus species

Mockingbirds were noted on Little Inagua and on Providenciales. They could have been either of two species, *M. polyglottos* or *M. gundlachii*.

Polioptila caerulea caerulea (Linnaeus)

♂, ♀; Little Inagua.

Both these specimens, in addition to two from Great Inagua, have wings that measure 49 to 50 mm. The wings of two New Providence examples in the American Museum of Natural History measure 45.5 and 47 mm., respectively, while that of a specimen from Little Abaco, in the same institution, measures 49 mm. The majority of gnatcatchers examined from the eastern United States have wings of over 50 mm.

This species is a common winter resident in western Cuba, but the status of continental individuals in the Bahamas during this season remains to be determined.

Vireo crassirostris crassirostris Bryant

♂, ♀; Little Inagua.

The gonads in both sexes were somewhat enlarged. The testes in the male measured 6 mm. This vireo was also found on Providenciales.

Coereba bahamensis bahamensis (Reichenbach)

Feathers writes that on Little Inagua "Coerebas were quite numerous, possibly numbering more than all the other species combined." On West

Caicos he found them "not as numerous as on Little Inagua," while on Providenciales he states that they were "quite uncommon."

Dendroica petechia gundlachi Baird

2 ♂, 3 ♀; West Caicos. ♂; o, Providenciales.

It has recently been pointed out that Bahaman Golden Warblers are indistinguishable in series from the Cuban *gundlachi* (cf. Bond, Proc. Acad. Nat. Sci. Phila., vol. 94, 1942, pp. 101-102).

Only two of the above males show a trace of rufous on the pileum. This species was also found on Little Inagua.

Dendroica discolor discolor (Vieillot)

♀; Providenciales.

Dendroica palmarum palmarum (Gmelin)

♂, ♀; Little Inagua. 3 o; Providenciales.

Considering the amount of collecting that has been done in the West Indies, the eastern race of the Palm Warbler (*D. p. hypochrysea* Ridgway) must be considered a very rare, if not accidental, winter resident in this region, whence it is known definitely only from Cuba.

Tiaris bicolor bicolor (Linnaeus)

♂; West Caicos.

B. The Birds of the Islands of Old Providence and St. Andrews, and of the Keys in the Southwestern Caribbean Outside the 100 Fathom Line

During the latter half of March 1941, the Vanderbilts visited Old Providence and St. Andrews in addition to a number of small keys in the West Caribbean, many of which had previously been unknown ornithologically.

The first point touched was Beacon Key, which lies 200 miles south of Jamaica. Beacon Key, the largest of the Seranilla Keys, is a few hundred yards in length and about a hundred yards wide. It is covered with samphire grass and other halophilus growth. On March 19 a landing was effected on this islet by swimming ashore from the yacht's launch. Fishermen with their families were living there for the purpose of catching turtles as well as gathering tern eggs and guano.

The days of March 20 and 21 were spent exploring the Serrana Keys about 100 miles to the south. These are stated to be much like the preceding.

Sailing in a southerly direction the *Pioneer* next stopped at Roncador Key, an islet of coral formation about 60 miles south of the Serrana Keys. Conditions here were similar to those of the two groups previously visited, except that the islet was found to be more rocky.

After spending March 22 and 23 on Roncador, the *Pioneer* sailed for Old Providence, about 90 miles to the westward. Old Providence is a beautiful volcanic island about 4½ miles in diameter with a maximum altitude of 1190 feet. It is covered with brush and low trees and there are several small streams. Collecting was carried on from March 24 to 26 but the higher elevations were not visited.

The expedition thence proceeded to St. Andrews, some 60 miles to the southward, where specimens were taken from March 27 to 29. Here the vegetation was found to be similar to that of Old Providence, but no streams were noted. St. Andrews is 7 miles long and only 1½ miles wide, and is much lower than Old Providence, the hills attaining an altitude of a little less than 350 feet.*

Next visited were the Courtown Keys, tiny islets about 20 miles southeast of St. Andrews supporting some low brush and a few palms; and later (March 31) the Albuquerque Keys, some 30 miles to the southeast.

The latter consist of two low, circular islets, one 200 yards in diameter and the other about half this size. They are well covered with low brush and there are a few coconut palms. A number of migrant birds from North America were encountered, in addition to what was presumably a resident land bird (*Anthracothorax p. hendersoni*).

Thus Vanderbilt touched at virtually all the keys in the western Caribbean outside the 100 fathom line, and through his perseverance acquired a valuable collection of birds. The North American migrants are of particular interest and show not only that the islands lie on one of the principle migration routes, but also that they are situated at or near the southern limits of the winter ranges of a number of North American land birds.

We are greatly indebted to the Colombian government which granted Vanderbilt permission to collect on Old Providence and St. Andrews and on other small keys under its jurisdiction.

Account of the Avifauna

The avifauna of Old Providence and St. Andrews is predominantly West Indian and these islands might well be considered as part of that region. Every genus that inhabits the islands also occurs in the Antilles, although none of the characteristic West Indian genera is present. Of the 14 species of land birds indigenous to Old Providence and St. Andrews, two are endemic, eleven inhabit the Antilles, while the remaining one, a hummingbird, is a representative of a widespread Central American species. At least nine of the West Indian species inhabit other islands off the Central or South American coast.

* For a more detailed account of Old Providence and St. Andrews, see Pilsbry, Proc. Acad. Nat. Sci. Phila., vol. 82, 1930, pp. 247-261.

Van Rossem states that " the major part of the avifauna of Cozumel " is of Antillean origin (Bull. Mus. Comp. Zool., vol. 77, 1934, p. 390) but, as correctly pointed out by Salvin, the affinities of the birds of this and other islands near the coast of Central America " are largely on the side of those of the mainland " (Ibis, 1890, p. 92). Cozumel, for instance, possesses some 20 genera of birds not found in the West Indies, and a number of the more remarkable resident species of this island, such as *Melanoptila glabrirostris* and *Toxostoma guttatum*, are of Mexican origin. A race of the West Indian *Spindalis zena* occurs here but is rare and it is likely that its arrival on Cozumel was comparatively recent (cf. Griscom, Amer. Mus. Novit., no. 236, 1926, pp. 5-13). Incidentally, all West Indian birds found on the islands off the northern coast of South America and eastern coast of Central America are merely subspecifically distinct from their Antillean relatives. Only in exceptional instances have these been able to obtain (or maintain) a foothold on the mainland, owing doubtless to increased competition. Their occurrence on islands extralimital to the West Indies proper may be due to the effect of hurricanes. It is, moreover, well known that a number of North American warblers, which winter commonly in the West Indies, and on islands off the east coast of Central America, are rare or completely lacking during this season on the mainland of Central America. Doubtless these birds too have found conditions more favorable on the islands.

Old Providence and St. Andrews are remarkable in possessing at least 15 endemic forms of birds, including two distinct species (*Mimus magnirostris* and *Vireo caribaeus*). Of these, five are confined to Old Providence, and eight to St. Andrews, while the remaining two are found on Old Providence and St. Andrews. In addition, a hummingbird (*Anthracothorax prevostii hendersoni*) is known only from these islands and the Albuquerque and Mosquito Keys.

In addition to Vanderbilt's collection the Academy possesses a few birds taken by Dr. William L. Abbott on St. Andrews, May 1, 1887. Among these is the type of *Coccyzus minor abbotti* Stone.

In March 1933, Mr. James Greenway, who accompanied the tenth Allison V. Armour Expedition, collected on Old Providence and St. Andrews. The birds obtained are in the collection of the Museum of Comparative Zoology at Cambridge, Mass. No report on this collection, apart from the description of the Old Providence Golden Warbler, has been published. We wish to thank Mr. James Peters, Curator of Birds at the Museum of Comparative Zoology, for permission to indicate the forms taken by this expedition.

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The following list includes all the birds known to occur in the area here treated.

Annotated List

Puffinus lherminieri lherminieri Lesson

Taken on Old Providence by Henderson.

Sula dactylatra dactylatra Lesson

Found nesting on Beacon Key (Serranilla Keys) by the Vanderbilt Expedition, but no specimens taken.

Sula leucogaster leucogaster (Boddaert)

Found nesting on Beacon Key by the Vanderbilt Expedition.

Sula sula sula (Linnaeus)

Taken on Old Providence and St. Andrews by Henderson and on the latter island by Abbott. Feathers writes that on Roncador Key the same

oceanic birds were found that were noted on the Serrana and Serranilla Keys and "perhaps also the Red-footed Booby" (*S. sula*). Abbott secured an immature specimen of this species off the "Serania (= Serranilla) reef" April 30, 1887.

Fregata magnificens rothschildi Mathews

Taken on Old Providence and St. Andrews by Henderson, and found nesting on Beacon Key by Vanderbilt.

Ardea herodias subspecies

One seen at the Serrana Keys by the Vanderbilt Expedition was probably a migrant from North America.

Hydranassa tricolor ruficollis (Gosse)

Taken on Old Providence and St. Andrews by Henderson.

Florida caerulea (Linnaeus)

Taken on Old Providence by Henderson, and reported as having been seen on St. Andrews by the Pinchot Expedition.

Butorides virescens virescens (Linnaeus)

A specimen taken by Vanderbilt on Old Providence, March 28, is a fully adult male with a wing of 171 mm. It matches birds from the eastern United States in having the sides of the head and neck purple-maroon, rather than chestnut with but little purple wash as in *maculatus* of the West Indies.

We agree with Todd (Ann. Carnegie Mus., 7, 1911, pp. 410-11) that there is no constant difference in size between these two races. For example, an adult male before us from Barbados, identical in color with the "smaller" race *maculatus*, has a wing of no less than 185 mm.

We have little doubt that the northern form will prove to be a common winter resident in the Greater Antilles and on other islands in the western Caribbean.

Butorides virescens maculatus (Boddaert)

Henderson secured three immature specimens of this heron on St. Andrews and an adult male on Old Providence. We are informed by Mr. Colin C. Sanborn of the Field Museum of Natural History that these examples "are very chestnut with but a little purple wash, so must be *maculatus* as labelled."

Peters has identified an immature female taken on the Corn Islands as "unquestionably" referable to *maculatus*.

Falco peregrinus anatum Bonaparte

A female was taken on Roncador Key (March 23) by Feathers, who says that he saw another individual on this islet, one at the Serranilla Keys, and

two at the Serrana Keys. The species is also known from the Morant and Pedro Keys south of Jamaica.

Feathers writes us that he saw what he thought was a Sparrow Hawk, presumably *Falco s. sparverius*, at the Albuquerque Keys.

Charadrius hiaticula semipalmatus Bonaparte

Taken by Vanderbilt at the Serrana Bank (March 20).

Actitis macularia (Linnaeus)

Collected on Old Providence and St. Andrews by Henderson.

Crocethia alba (Pallas)

Taken by Vanderbilt at the Serrana Bank (March 20).

Sterna fuscata fuscata Linnaeus

A specimen was collected at St. Andrews by Abbott and another at the Serrana Bank by Vanderbilt (March 20).

Columba leucocephala Linnaeus

Taken on Old Providence by Henderson and on St. Andrews by Vanderbilt.

The two males secured by Vanderbilt on St. Andrews have the fore-part of the hind neck dusky, glossed with green. There is no trace of a maroon tinge.

This pigeon is subject to migratory movements concerning which little is known. It ranges widely through the West Indies, with the exception of the more southern of the Lesser Antilles, and is also found on islands off the coast of Central America and perhaps on the north coast of Honduras proper.

Zenaida asiatica asiatica (Linnaeus)

Collected on Old Providence by Henderson and by the Pinchot Expedition, and on St. Andrews by Vanderbilt.

Leptotila jamaicensis neoxena (Cory)

Confined to St. Andrews, whence taken by Henderson and Vanderbilt. This interesting dove can readily be distinguished from the other races of this species (viz. *jamaicensis*, *collaris*, and *gaumeri*) by its grayish olive-brown upper parts and by having the metallic gloss of the feathers of the hind neck and sides of neck much less reddish purple. The St. Andrews race has hitherto been known only from one male and five females. Vanderbilt obtained a fine series, comprising seven adult males, one adult female, and one questionably labelled as an immature female. The immature specimen has the glossy area of the hind neck much reduced in extent and the feathers of the nape are violet. The inner remiges and greater wing-coverts are narrowly margined with buffy. The breast and sides are darker than in the adults and are washed with buffy. The adult female has the

breast duller, less clear vinaceous, than the males. The adults had the feet "reddish", whereas those of the immature were "flesh-color." The bill in all specimens was noted as "black", the eyelids as "reddish" in the adults, "pale pink" in the immature specimen. Testes of the males were recorded as measuring from 8-11 mm.

Other representatives of this species are found in Jamaica (*jamaicensis*), Grand Cayman (*collaris*) and in Yucatán, including Cozumel and other islands off the coast of Yucatán (*gaumeri*).

Coccyzus minor abbotti Stone

Confined to Old Providence and St. Andrews. Secured on the former by Henderson and by the Armour and Pinchot expeditions, and on St Andrews by Abbott.

The type in the Academy's collection resembles the Greater Antillean *nesiotes* (Cabanis and Heine), but the bill is definitely longer and the posterior under parts paler. Compared with the nominate form from South America, including the islands of Trinidad and Aruba, the bill in *abbotti* is slightly longer and the throat darker, more ochraceous. This cuckoo is very different from *continentalis* van Rossem, of which we have four specimens from Utila Island, Honduras. The last mentioned race is much smaller and darker both above and below than *abbotti*. The plumage of the Bay Islands birds is as dark as in a female from Dominica (*dominicae* Shelley), but the Dominican example is somewhat grayer above. *C. m. cozumelae* van Rossem, of Cozumel Island, is obviously nearest *continentalis*, since it is described as a very dark, small race. It can have no close relationship with the pale races from the Greater Antilles.

Anthracothorax prevostii hendersoni (Cory)

Taken on Old Providence by all collectors and on St. Andrews by Abbott, the Armour and Pinchot expeditions, and by Vanderbilt. Also collected by Vanderbilt on Albuquerque Key and recorded by Simon from "le Banc des Mosquitos" (Hist. Nat. Troch., 1921, p. 276).

Vanderbilt secured a fine series of this hummingbird, including four adult males and three females from St. Andrews, two males and one female from Old Providence, and a male from Albuquerque Key. In addition, the Academy has a male taken on Old Providence by Henderson (from the collection of Cory and Boucard), and a male taken on St. Andrews by Abbott. Examination of these specimens indicates there is but one species of hummingbird and in fact one race inhabiting these islands and that *A. nigricollis pinchoti* Wetmore (Proc. Biol. Soc. Wash., 43, 1930, p. 7), described from St. Andrews, is a synonym of *A. p. hendersoni*. The males show considerable variation in the color of the under parts. The specimen collected on Old Providence by Henderson is virtually identical with *nigricollis* (Vieillot). The other males from this island approach *gracilirostris*

Ridgway, but have the middle of the abdomen very dark violet or blackish. Males with the least amount of black on the under parts we believe to be immature, as is indicated by the presence of pale tips to the rectrices. A male (A. N. S. P. 150967) from the same island is near *gracilirostris* but has the chest more extensively violet and the middle of the abdomen blackish. Incidentally, *gracilirostris* shows an approach to *hendersoni* in having a shorter bill and less compact black throat patch than the more northern *prevostii*. Females from Old Providence and St. Andrews have the outer rectrices broadly tipped with white as in *prevostii* and *gracilirostris*, the Central American races, not narrowly tipped with white as in *nigricollis*.

It seems apparent that we are dealing with an unstable population somewhat intermediate between *nigricollis* and *prevostii*, but nearer the latter rather than the former as stated by Simon (Rev. Française d'Ornit., 1, 1909, p. 9). To make the matter more complicated, there is a hummingbird in northern South America described by Cory as a race of *prevostii* (*A. p. viridicordatus*). Very little is known about this bird of which we have examined a series (5 ♂, 2 ♀) in the American Museum of Natural History from "San Felix," Cumaná, Venezuela. Typical *nigricollis* also occurs in Cumaná, but quite possibly in a different environment. Todd records the two species from Guarico, Venezuela (cf. Todd, Ann. Carnegie Mus., vol. 29, 1942, pp. 294-295).

It is of interest to note that females of *viridicordatus* have the outer rectices broadly tipped with white as in *hendersoni* and *prevostii* but unlike the female of *nigricollis*. Males of *viridicordatus*, unlike those of *hendersoni*, show little variation. They differ from adults of *hendersoni* in having only a slight bluish tinge to the under parts and very little black on the breast.

Megaceryle alcyon alcyon (Linnaeus)

Collected on St. Andrews by Henderson and by Vanderbilt (March 28).

Sphyrapicus varius varius (Linnaeus)

Taken by Henderson on St. Andrews, which is near the southernmost limit of its winter range. There is only one record from as far south as Panama (Chiriqui) and none from South America.

Tyrannus tyrannus (Linnaeus)

Secured by Henderson on Old Providence. It is noteworthy that *Tyrannus dominicensis*, found virtually throughout the West Indies, is not known from Old Providence or St. Andrews. It should be expected to occur on migration and perhaps even as a summer resident.

Contopus virens (Linnaeus)

Taken by Vanderbilt on St. Andrews (March 28), and on Albuquerque Key (March 31).

Elaenia martinica cinerescens Ridgway

Secured on Old Providence by all collectors, and on St. Andrews by Henderson, Greenway, and Vanderbilt. It was seen on St. Andrews by the Pinchot Expedition.

An Antillean species found on a number of islands extralimital to the West Indies, viz. Cozumel (*E. m. remota*), Chinchorro Key, off the coast of Quintana Roo, and Halfmoon Key, British Honduras (*E. m. chinchorrensis*), Old Providence and St. Andrews (*E. m. cinerescens*), and the Dutch islands in the south Caribbean (*E. m. riisii*).

This flycatcher favors small islands and appears unable to compete with the closely allied and widespread species *E. flavogaster*, which doubtless accounts for its absence from the mainland.

Hirundo rustica erythrogaster Boddaert

"Considerable numbers" seen on Old Providence and St. Andrews by the Pinchot Expedition (April 24 and 27).

Petrochelidon pyrrhonota pyrrhonota (Vieillot)

A female was taken at the Serrana Bank, March 21, by Vanderbilt. This swallow migrates south to the Argentine.

Mimus magnirostris Cory

This fine species is confined to St. Andrews, whence it has been taken by all collectors. It seems to be most nearly related to *M. gilvus* from which it differs mainly in being larger, the bill in particular being extraordinarily heavy.

Dumetella carolinensis (Linnaeus)

Taken by Henderson on St. Andrews, which is near the southernmost limit of its winter range.

Vireo caribaeus Bond and de Schauensee

Confined to St. Andrews, where it was collected by Henderson, Greenway, and Vanderbilt. This interesting vireo, which was but recently described (Not. Naturae, no. 96, 1942, p. 1), had for long been misidentified as the northern White-eyed Vireo (*V. griseus*). Actually the bird more closely resembles *V. huttoni* and *V. pallens*. The last mentioned vireo is found only in mangrove swamps on the Pacific coast of Central America. The St. Andrews bird differs from *pallens* in being even whiter below, and the bill is darker and slenderer. *V. crassirostris* has, together with numerous other insular birds, a larger bill than its mainland relatives.

The inter-relationship of vireos, of the subgenus *Vireo*, from the West Indies and other Caribbean islands is most puzzling. *V. caribaeus* was perhaps derived from *V. pallens*, and *V. crassirostris* from *V. ochraceus*.

Vireo crassirostris approximans Ridgway

Confined to Old Providence, whence it has been obtained by Benedict and Nye, Henderson, and by the Pinchot Expedition. This race is very near typical *crassirostris* (Bryant) of the Bahama and Cayman Islands. The Thick-billed Vireo is closely related to the Central American *V. ochraceus*, which is found on the Caribbean coast of Nicaragua.

Vireo olivaceus olivaceus (Linnaeus)

The Red-eyed Vireo was collected by Vanderbilt on Albuquerque Key, March 31.

Vireo altiloquus grandior (Ridgway)

Confined to Old Providence, at least as a breeding bird. Taken by Benedict and Nye (early April), Henderson (March 3-17), and by the Pinchot Expedition (April 23-24). The species is only a summer resident in the Bahamas, Cuba, and Jamaica, departing for South America in early autumn and reappearing on these islands in March.

Vireo altiloquus canescens (Cory)

Confined to St. Andrews, whence taken by Henderson (Feb. 14-16) and by the Pinchot Expedition (April 27). The early dates on which Henderson obtained this vireo indicate that the bird is resident.

The Black-whiskered Vireo (*V. altiloquus*) is a characteristic West Indian species, found virtually throughout this region, except on Grand Cayman, where it is replaced by a race of the Central American *V. magister*. Outside the West Indies proper, the species is known to nest only on Old Providence and St. Andrews and in southern Florida. A record of its breeding in Trinidad requires confirmation (Belcher and Smooker, Ibis, 1937, pp. 513-514). A record from Cozumel Island (May) presumably pertains to a transient individual, since this island is known to be inhabited by the closely related *V. magister* (Salvin, Ibis, 1888, p. 253).

Coereba bahamensis tricolor (Ridgway)

Confined to Old Providence, whence collected by Benedict and Nye, Henderson, and by the Armour and Pinchot expeditions.

Coereba bahamensis oblita Griscom

Confined to St. Andrews, whence taken by all collectors. The bananaquits of Old Providence and St. Andrews belong to a group found elsewhere in the Bahamas (*C. b. bahamensis*), Cayman Islands (*C. b. sharpei*), and on Cozumel and Holbox Island off the coast of Yucatán (*C. b. caboti*).

Mniotilta varia (Linnaeus)

Obtained at St. Andrews by Henderson and Vanderbilt (March 29).

Protonotaria citrea (Boddaert)

Secured on Albuquerque Key by Vanderbilt, March 31.

Vermivora peregrina (Wilson)

Two collected on Albuquerque Key by Vanderbilt, March 31.

Parula americana pusilla (Wilson)

Taken on Old Providence by Henderson. This is at the southernmost extremity of its winter range, the species being unknown from South America.

Dendroica petechia armouri Greenway

Confined to Old Providence, whence secured by the Pinchot and Armour expeditions. This Golden Warbler was probably derived from Jamaica.

Dendroica petechia flavida Cory

Confined to St. Andrews, whence taken by Henderson and by the Armour and Pinchot expeditions. We agree with Hellmayr in uniting the "Mangrove Warblers" with the "Golden Warblers" (Birds of the Americas, pt. 13, 1935, p. 374, footnote), and also with Aldrich who considers the "Yellow Warblers" and "Golden Warblers" conspecific (Auk, 1942, pp. 447-449).

Dendroica tigrina (Gmelin)

Collected on Old Providence by Vanderbilt, March 26. Except for a record from Tobago, this is the southernmost record of the Cape May Warbler.

Dendroica coronata (Linnaeus)

Taken on Old Providence by Henderson. Near the southern limit of its winter range. This warbler is recorded as an abundant winter resident on the Corn Islands (Peters).

Dendroica cerulea (Wilson)

Taken on Albuquerque Key by Vanderbilt, March 31. The Cerulean Warbler winters as far south as Bolivia.

Dendroica palmarum palmarum (Gmelin)

Secured on Old Providence by Henderson. The southernmost record of the species.

Seiurus noveboracensis notabilis Ridgway

Taken on Old Providence and St. Andrews by Henderson. This species was seen on the former island by the Pinchot Expedition. These records may pertain to the recently described *limnaeus* McCabe and Miller.

Seiurus motacilla (Vieillot)

Taken on Old Providence by Henderson.

Seiurus aurocapillus (Linnaeus)

Taken on Old Providence by Henderson.

Geothlypis trichas brachidactyla (Swainson)

Collected on Albuquerque Key by Vanderbilt. Near the southern limit of the winter range of this species. *Seiurus motacilla, S. aurocapillus,* and *Geothlypis trichas* have been recorded in South America only from northern Colombia.

Setophaga ruticilla (Linnaeus)

Seven taken on Albuquerque Key by Vanderbilt, March 31.

Icterus leucopteryx lawrencii Cory

Confined to St. Andrews. The species is found elsewhere only in Jamaica and on Grand Cayman. It is of interest to note that *lawrencii* is intermediate in color between the Jamaican and Grand Cayman races.

This oriole appears to be fairly common on St. Andrews, since all collectors have obtained it. Very different is the status of the beautiful race from Grand Cayman, which is one of the really rare birds of the West Indies.

Mr. Feathers states (in a letter) that he saw "a flock of grackles" on Old Providence. Unfortunately he was unable to obtain a specimen. Grackles (*Holoquiscalus lugubris guadeloupensis*) have recently extended their range among the northern Lesser Antilles, apparently to some extent as the result of hurricanes, and it is not inconceivable that they should have reached Old Providence. Those seen may prove to belong to the Jamaican or one of the Cayman Island forms of *Holoquiscalus niger,* or to a form of *Cassidix mexicanus,* the widespread continental grackle. We think it possible, however, that the birds seen were anis (*Crotophaga ani*), which inhabit the Corn Islands. There is, however, no record of any of these birds from Old Providence or St. Andrews.

Tiaris bicolor grandior (Cory)

Confined to Old Providence and St. Andrews. The species ranges widely through the West Indies, with the notable exception of Cuba, the Isle of Pines, and Cayman Islands. It is also found in northern Venezuela and Colombia, but not on the mainland of Central America.

This finch was taken by Henderson and by the Armour and Pinchot expeditions on both Old Providence and St. Andrews. Vanderbilt secured it on St. Andrews, and the Academy possesses a specimen taken on Old Providence by Dillon Ripley, January 1, 1937, while en route to New Guinea with the Denison-Crockett South Pacific Expedition.

Spiza americana (Gmelin)

Collected on Old Providence by Henderson and on Albuquerque Key by Vanderbilt (six specimens, March 31).

Annex 48

M. C. PRADA TRIANA, "COMPARATIVE STUDY OF A SECTION OF THE SEAFLOWER MPA AS POTENTIAL WORLD HERITAGE SITE", CORPORACIÓN PARA EL DESARROLLO SOSTENIBLE DEL ARCHIPIÉLAGO DE SAN ANDRÉS, PROVIDENCIA Y SANTA CATALINA (CORALINA), 2009

Corporación para el Desarrollo Sostenible del Archipiélago de San Andrés, Providencia y Santa Catalina

Comparative Study of a Section of the Seaflower MPA as Potential World Heritage Site

By

Martha Cecilia Prada Triana, Ph.D.

CORALINA ADVISOR

San Andres Island, April 22, 2009

Comparative Study of a Section of the Seaflower MPA as Potential World Heritage Site

By

Martha Cecilia Prada Triana, Ph.D.

Corporation for Sustainable Development of the Archipelago of San Andrés, Providence and Santa Catalina –CORALINA-, Colombia

I. Introduction

The only multiple use Marine Protected Area (MPA) in Colombia is the Seaflower MPA, established in June 2005 by the Ministry of Environment in support of a 5.5-year extensive scientific and consultative processes leaded by the Corporation for Sustainable Development of the San Andrés, Providence and Santa Catalina (CORALINA). The Seaflower MPA (65.000 km^2) is the largest in the Caribbean region, and among the largest in the World. The existence of this new management model opened the door for the strengthen of the conservation policies while allowing for the sustainable use and organization of the marine users living or visiting the San Andres, Providence and Santa Catalina archipelago.

Located in the western Caribbean, the Archipelago is indeed the Colombian only completely oceanic administrative department and comprises its northern frontier bordering with Panama, Nicaragua, Honduras, Jamaica and Dominican Republic. CORALINA as national governmental agency is responsible for the promotion of the conservation and the sustainable use of the islands natural resources, both on land and on the ocean.

Accordingly with this mandate, CORALINA explored ways in the local, national and international scenarios to be able to obey the law integrating, at every step, a strong social responsibility characteristic of all its institutional actions. As a consequence, one of the CORALINA first achievements was the inclusion of the archipelago within the World Network of Biosphere Reserves by UNESCO's Man and the Biosphere (MAB) Program back in November 2000 in recognition of the archipelago mosaic of ecological systems (terrestrial, coastal and marine environments) and its rich culture. Known as the Seaflower Biosphere Reserve (BR), it represents the largest oceanic BR in the World and is seven in extension among all the 531 (as of May, 2008) areas declared as BRs. There are only three other BRs in Colombia.

Since then, people in the islands living (or visiting) have been learning about the compromises and the respectful behaviors assumed with the UNESCO´s declaration. CORALINA support them by implementing serious planning and educational and

outreach programs and activities. In addition, is working in the development of new and sound practices that can be developed to overcome high levels of poverty and unemployment, based on the best scientific information available.

Is under this framework, that CORALINA continued tirelessly looking for options that link conservation, sustainability and human development as a whole. It found an answer in the emergent management model known as MPAs. Then, with the support of the World Bank/Global Environmental Facilities (GEF) and a number of national and international partners initiated exhaustive programs on basic research, management, capacity building and education and outreach to fill the gaps and be able to reach agreements, summarized in the final declaration act of the Seaflower MPA, endorsed by the Ministry of Environment.

Five clear MPA objectives were stated as follow: a) conservation, recovery, and long-term maintenance of species, biodiversity, ecosystems, and other natural values including special habitats; 2) promotion of sound management practices to ensure long-term sustainable use of coastal and marine resources; 3) equitable distribution of economic and social benefits to enhance local development; 4) protection of rights pertaining to historical use; and 5) education to promote stewardship and active community involvement in management.

Currently, and after five years of the declaration, CORALINA was able to tight its relationships among a wide variety of stakeholders, including organized fishers, recreational divers, nautical sport operators, local and national institutions, international supporters, students, teachers and the general community. The advance in the MPA management plan implementation is coming along by steps, overcoming day to day limitations, but also bringing new ideas and partners. Still facing the challenges associated with the administration of an immense oceanic and remote reef systems, believes that only through cooperation and communication it will be possible to preserve the local reef productivity and unique values, while improving the quality of life of its people, and the Caribbean region.

Therefore, one important next step will be focused in the selection of a special area that can be dedicated to the preservation of the world most complex systems, the well developed coral reef resources comprising the Seaflower MPA. In that sense, this document is describing from the various points of views the natural value of the Seaflower MPA in general, pointed the relevance of the selected area and comparing them with other sites in the Caribbean region. The document can be utilized as basis for the nomination of the selected site as a new Colombia Word Heritage site. At present the county has only two of these areas, the Katios National Park in the mountains and the Malpelo Fauna and Flora Sanctuary in the Pacific Ocean.

The world heritage nomination process will trying to justify why the selected area fulfill three of UNESCO´s criteria as follow:

- VII- to contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;

- IX- to be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals;

- X- to contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

The contents of this document will develop from several aspects why it is believed the selected area can fulfill these requirements based on the best and updated scientific knowledge we have been able to compile. While this is true, the most relevant situation is that still much more is unknown for the science. With the inclusion of this area as a world heritage site we are saving the perhaps the last Caribbean site that is free of major environmental and human threats and preserving it for future generations allowing future exploration on completely new oceanic, connecting and deep water corals ecosystems.

At the same time, CORALINA is dedicating significant efforts to improve MPA enforcement and surveillance, identified and develop alternatively livelihoods, monitoring MPA effectiveness indicators and strength Education and outreach, thus the selected area with highest conservation regulations would benefit from a well managed surrounding MPA, all contributing to human development.

II. Area Location

Accordingly with the CLME project implementation unit (2007), the wider Caribbean extends from the mouth of the Amazon River, Brazil, through the Insular Caribbean, Central America, the Gulf of Mexico and along the east coast of North America to Cape Hatteras (Figure 1). This area also corresponds to the region covered by the FAO Western Central Atlantic Fishery Commission (WECAFC), with a total area of approximately 15 million km^2 of which some 1.9 million km^2 is shelf area (Breton et al. 2006).

The Caribbean Sea is a semi-enclosed ocean basin encompassing an area of 2,515,900 km^2, making it the second largest sea in the world (Bjorn 1997, Sheppard 2000, IUCN 2003). Its average depth is 2,200 m, with the deepest part, known as the Cayman Trench, plunging to 7,100 m. The Caribbean Sea is noted for its many islands, and is bounded by the islands of the Lesser Antilles to the east and southeast, the islands of the Greater Antilles (Cuba, Hispaniola and Puerto Rico) to the north, and by Central and South America to the west and southwest. It is located within the tropics, with surface water temperature ranging from a minimum of 3˚C and an annual average of 27˚C.

The Archipelago of San Andrés and Old Providence (Figure 2) comprises a series of oceanic islands, barrier-reef complexes, atolls and coral shoals on volcanic basement,

lined up in a north-northeastern direction over nearly 500km along the Lower Nicaraguan Rise off the Central American continental shelf (Geister 1973, 1982; Díaz et al. 1995; Díaz et al. 1996a, 1996b, 2000).

Figure 1. The Caribbean basin identifying the location of the Southwestern sub-region. (taken from Burke and Maidens 2004).

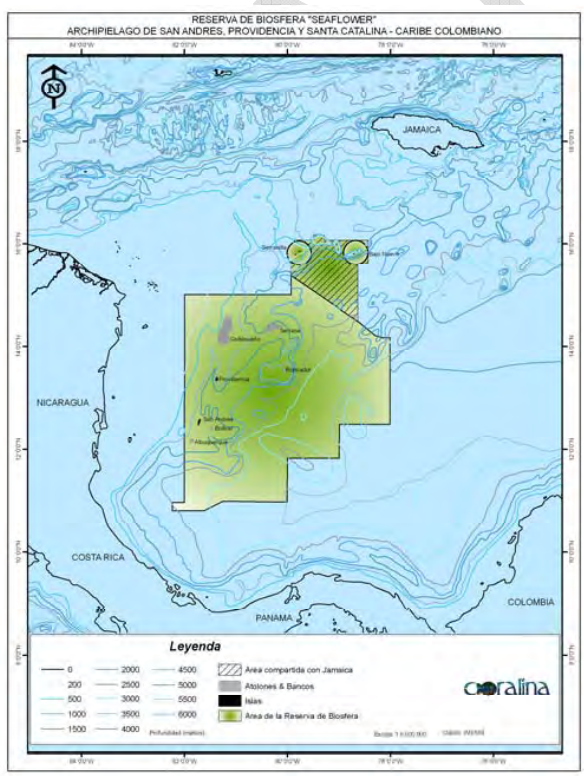

Figure 2. Location of the Seaflower Biosphere Reserve (San Andres, Providencia and Santa Catalina archipelago).

Located in the southwestern Caribbean (11º 30' to 16º 30' N, and 78º 28' to 82º 0' W), the Seaflower BR is composed by ten true reef atolls extending over transparent, oligotrophic and oceanic waters encompassing more than 178,000 km² area. Northern atolls are Serranilla, New, Alice, Quitasueño, Serrana, Roncador; the central atoll includes Old Providence and Santa Catalina atoll; and the southern atolls are San Andres, East-South East and South-South-West. Reef atolls are rare geo-morphological features first explained by Darwin in 1842, and viewed as the corals growing around tropical islands originated by volcanic activity. The atoll then represents a sequence of gradual subsidence of what started as an oceanic volcano.

The area pre-selected to be nominated as a world heritage site comprise the Roncador atoll and its adjacent seamounts and deep waters and benthic habitats covering a total area of 9,300 km² (Figure 3). This area is the least fished of the Seaflower BR because of its small size, its eastern location and the strong currents present most of the year. It is not in the route of freighters or tankers, thus have minimal chances of being impacted by oil or dirty water discharges. By having only 10 permanent residents and being free tourism, it is expected to preserve an excellent example of natural coral environments and good water quality, unlikely most Caribbean places.

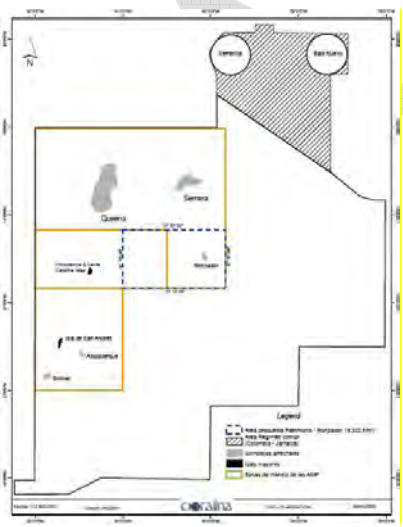

Figure 3. Pre-selected world heritage site area around Roncador atoll (blue line) with respect to the Seaflower MPA (orange line).

III. Geographical and Geologic Characteristics

The Caribbean region was formed during the Jurassic period. With the division of the mega-continent Pangaea 180 million years ago came the separation of the lands that

would become North and South America. The subduction of the Cocos and Nazca plates and the continuous collision of continental plates produced continental and submarine mountain ranges including the rise of Central America, which formed a biogeographical bridge, allowing the migration of floral and faunal species between North and South America – an important factor in the region's high biodiversity (Windevoxhel 2003, Lutz and Ginsburg 2007).

Interactions between the Caribbean plate, North American plate and the South American plate produced the major topographic features and allow the Caribbean basin to be divided into four smaller basins; the Yucatan, Colombian, Venezuelan and Granada basins. Within each basing there are features of particular interest, including deep water trenches, ridges, basins, interisland passages, channels and shallow reef atolls (up to 30m in depth) and numerous seamounts, trenches and faults of very deep water up to 4.5 km, along with a section of the platteu of the Nicaraguan rise (Figure 4).

The various submarine reef features comprising the Seaflower MPA atolls are separated from the Nicaraguan rise by a trench of more than 2,200m (Andrade 2005). These features include ten reef atolls (Serranilla, New, Alice, Quitasueño, Serrana, Roncador, Providence, San Andres, East-South-East and South-South-West). In general, the reefs have a similar volcanic history, despite the recent tectonic reactivation seen in the islands of Old Providence and Santa Catalina leaving a rugged terrain still above sea-level (Zea et al., 1998).

Accordingly to Veesei (2000), in the world there are around 261 atolls at sea level plus 116 drowned. Usually, atolls occurs in clusters and correspond to the Northern Caribbean, the Southern Caribbean, the Seychelles-Mascarene Ridge, the Laccadives-Maledives-Chagos, the South China Sea, Makassar Strait, the Caroline Islands, the Queensland Plateau, the Lord Howe Rise to New Caledonia, the Melanesian Borderland, and the Hawaii Chain. The Caribbean and the western Indian Ocean each contain about one third of the world's.

Seamounts are other structures commonly found within the Seaflower MPA and most probably covered by deep sea corals as it is the case for other seamounts throughout the world (Freiwald 2002, Clark et al. 2007). They are understood as mountains rising from the ocean seafloor that does not reach to the water's surface (sea level), and thus are not an island. They rise abruptly from 1,000 to 4,000m in depth up to 200-300m below the surface. Similarly to reef atolls, seamounts are unusual features. An estimated 30,000 seamounts are believed to occur across the globe, but only a few of them have been studied. The ones belonging to the Seaflower MPA are almost unknown for scientists and managers, but fished for deep water groupers and snappers or highly migratory marine species (Erick Castro, personal communication). Indeed seamounts are though to attract pelagic fish because of an enhanced primary productivity due to particular oceanographic conditions supporting a rich ecosystem (Allain et al. 2006).

Having this complex reef structure, the bathymetry within the Seaflower MPA is also complex. However, very little is known about the details on these topographic

constrictions, since only coarse scale uplifting structures have been located in currently available national and international nautical charts.

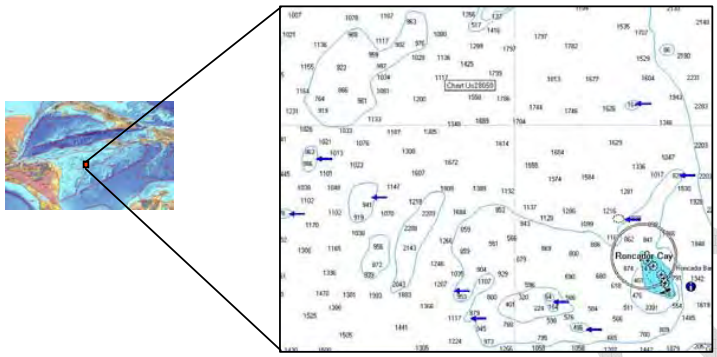

Figure 4. Location of Roncador and surroundings seamounts (red box and expanded window) in the southwestern Caribbean. Geological map used for location taken from US Geological Service, bathymetry from nautical chart US26081.

Coral reefs have been present on Earth for over 3.5 billion years, and the record presents a highly complex pattern of origination, expansion, collapse, and eventual extinction of a series of different ecosystems. The ones in the Caribbean region are the result of populations dispersal from the Mediterranean fauna until this ceased in the Miocene (22 Ma) due to changing circulation patterns (Bud et al. 2000).

IV. Oceanography

The existence Seaflower BR reef atolls aligned on a northeast to southwest axis emerging in a region of complex bathymetry channeled the dominant west flow from the Caribbean Sea and plays a crucial role in the oceanic circulation patterns because current velocities increase when water flow meets elevations of the sea floor. Indeed in this region, the Yucatan Current moving north-northwest is originated when around 60% of the approaching Caribbean current is diverted north (Andrade 2001, Lutz and Ginsburg 2007, Andrade in press). They are also responsible for the generation of the south-east current commonly known as the Colombia-Panama gyro formed by anticyclonic meso-scale eddies (100 to 500 km), having on average swirl speeds of ~40 cm/s and accounting for the remaining 40% of the incoming flow(Andrade and Barton 2000) (Figure 5).

Most eddies in the southwestern Caribbean region are formed and eroded locally disappearing at the Central American Rise area. Apparently, these eddies are the reason for the upwelling of cold and rich nutrient waters from deeper zones which generate zones of high productivity (Garay et al. 1984). Reef barriers and atolls alignment responds therefore to the wave direction, which in turn influence the climatic patterns of the inter-tropical convergence zone.

The Colombia-Panama gyre, the most relevant eddy system, is unique because its year long presence and broad area of influence (Mooers and Maul 1998). The gyre is composed by a triad of small eddies embedded in a larger but weaker cyclonic circulation, generating for a highly complex circulation structure (Andrade and Barton 2000). Richardson (2005) suggests that this gyre is quasi-permanent, which is uncommon for cyclonic gyres, and that its internal speed can reach 100 cm s^{-1}.

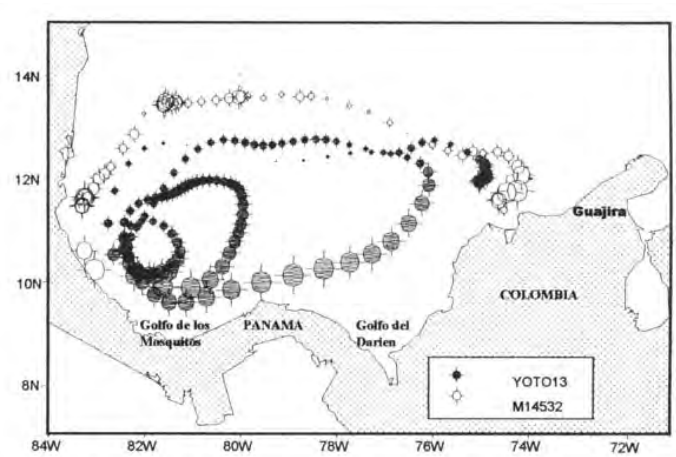

Figure 5. Movement of surface buoys confirming the loop in the Colombia-Panama gyro (Taken from Andrade 2001).

Roncador is an eastern atoll, first encountering the Caribbean surface current and is characterize for its constant movement, a characteristic that is also the origin of his name (the continues sound of the waves resembling a snoring person). The intensity of the current there is not as strong in other of the archipelago atolls (Serranilla, New and Alice) thus allowing for the development of extensive coral reef formation, not present at highest current velocities.

Physical oceanography is a key environmental factor in structuring reef connectivity on a regional basis. Mesoscale variations along the reef in the Meso-american region were found seasonal in model simulations and in observations; these variations are associated with meandering of the Caribbean current and the propagation of Caribbean eddies (Tal Ezer et al 2005, Wang 2006). They confirmed the important role in the sub-tropical circulation in the West Caribbean Sea between 15–22 ˚N and 76–87 ˚W in the route of the subtropical gyre circulation, connecting the Caribbean current with the Loop current of the Gulf of Mexico.

The Loop current varies in phase with the North Atlantic Oscillation carrying wind moisture from the ocean up to the central United States, usually resulting in an opposite (drop) rainfall pattern in the tropical North Atlantic Ocean and Atlantic warm pool versus the central United States (Wang 2006).

The source of the Caribbean current is the equatorial Atlantic Ocean via the North Equatorial, North Brazil and Guyana Currents. Water flows into the Caribbean Sea mostly through the Grenada, Saint Vincent and Saint Lucia passages in the southeast, continuing westward as the Caribbean Current – the main surface circulation in the Caribbean Sea (Figure 6).

Water masses entering the Caribbean originate in both the North Atlantic and the South Atlantic Ocean. The origin of the water can be determined by examining its unique temperature, salinity, and dissolved oxygen signature; South Atlantic waters are less saline and have more dissolved oxygen than do North Atlantic waters of the same density (Wilson and Kaufman 1987). The circulation pattern of the North Atlantic gyre suggests that South Atlantic water is likely to enter the Caribbean mostly through the southern passages. Wust (1964) analyzed historical hydrographic data and found this to be the case, but more recent surveys through the southern passages found waters of North Atlantic origin (Mazeika et al. 1980; Wilson 1997). This suggests that the amount of South Atlantic water flowing into the Caribbean may have strong time dependence (Wilson 1997).

Caribbean Surface Water is found in the upper 50 m of the water column. It is relatively fresh, with salinity values of <35.5, and has potential temperature of about 28°C. Caribbean Surface Water is probably a mixture of North Atlantic surface waters, Amazon River water, and local freshwater runoff from South America. Subtropical Underwater is found deeper, at about 150 m. It is more saline (salinity of 37 or higher) and cooler (temperature of 22-23°C). This water mass is formed in the central tropical Atlantic, where evaporation exceeds precipitation. The waters on the archipelago, similarly as other areas in the western Caribbean, have maximum of chlorophyll at approximately 2˚C and (Hallock et al. 1991).

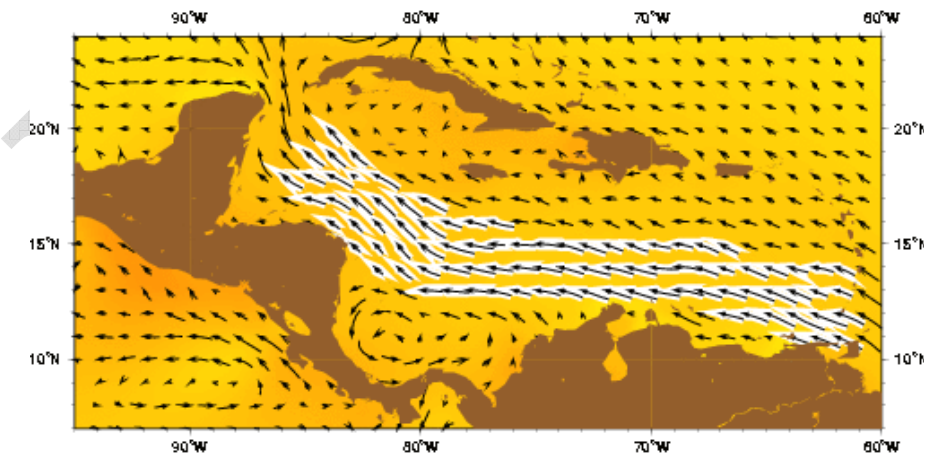

Figure 6. Diagram of the Caribbean current, denoting the importance of the Seaflower BR in the Caribbean surface circulation. Map taken from http://oceancurrents.rsmas.miami.edu/caribbean/caribbean.html

In conclusion, Seaflower BR and Roncador in particular are of regional importance because is the origin of major Caribbean circulation patterns that allows for the coral establishment and acts as the connecting force within and among surrounding reefs and waters.

V. The Coral Reef Formations

In Colombia there are about 2,860 km² of coral reefs in the Caribbean, sparsely distributed among 26 discrete areas: the mainland coast with fringing reefs on rocky shores (Santa Marta and Urabá); the continental shelf reefs around offshore islands (Rosario and San Bernardo archipelagos); and the oceanic reef complexes of the San Andrés Archipelago or the Seaflower BR (Rodriguez et al. 2008). Oceanic reefs account for up to 77% of the country reefs.

The well developed coral reefs in the Seaflower BR include extensive and remarkable benthic habitats such as barrier reefs, reef lagoons, reef slopes, fore-reefs, deep coral plateaus, numerous seamounts, and unknown deep coral reefs (Diaz et al 2000). In addition rare and beautiful coral reef formations such as tall pinnacles, steep walls, extensive meander-like *Montastrea* lagoons, and ribbon reefs with high *Acropora* coverage are seen in several atolls.

The rugose coral habitats in the atolls are considered of high quality essential fish habitat, then important in sustaining commercial fisheries both at industrial and artisanal levels. Most valuable stocks on the Seaflower MPA are spiny lobster (*Panulirus argus*), queen conch (*Strombus gigas*), deep water snappers and groupers (ie: *Mycteroperca bonaci, M. venenosa, M. tigris, Epinephelus morio, E. striatus, Lutjanus vivanus, L. bucanella, and L. jocu* among others) as well as pelagic species such as *Thunnus atlanticus, Acanthocybium solandri, Coryphaena hippurus*, and *Katsuwonus pelamis*.

In particular, the knowledge of the reef formations in the Roncador atoll was obtained from two scientific expeditions, one organized by INVEMAR in 1996 and the other by CORALINA in 2003 with additiona information from Milliman (1969) and Ortega (1943). The coral formation in this atoll was considered the best developed reef in Colombia (Figures 7 and 8) because its wide fore-reef terraces covered with *Acropora, Diploria, Millerpora* and several octocorals; its shallow and wide reef crest and lagoonal habitats being also coral dominated (>50%) environments; and the leeward reefs with a gentle slope (Diaz et al. 2000).

Accordingly with Sánchez et al. (2003) Roncador is of particular importance among the Seaflower BR reefs because contains: a) highest rugosity benthic habitats; b) highest octocorals abundance; c) abundant populations of sponges particularly on the deeper stations; and d) low proportions of coral disease (e.g., white plague 0-5% average, dark spots 0-10%; bleaching 0-5%); d) highest mean coral cover (41.9 %); e) dominance of *Montastraea* species complex in the lagoon and the leeward margin. In addition they observed 43 species of reef-building corals, 12-29 (min-max) species recorded per station, variable proportions of macro-algae (10-59%), from which calcareous were as high as 18%. During the 2003 expeditions the best developed coral zone (fore-reef) was

not surveyed due to strong oceanographic conditions, therefore values presented above can even be improved once the whole atoll is considered.

Unlike most Caribbean places, in Roncador the dominant reef-building corals is *Montastraea franksi* while in the shallow habitats or "flats" healthy aggregations of *Acropora palmata* (sometimes together with *A. cervicornis* and *Porites furcata*) are found. The conglomerated of *A. palmata* ridges are 50-200m separated from each other by sandy areas, denoting still successful fragmentation of the Caribbean acroporids (Lerman 2000), and perhaps generating a clonal dominance. This kind of habitat harbors a rich fish community (Lerman 1999, Dahlgren et al. 2003).

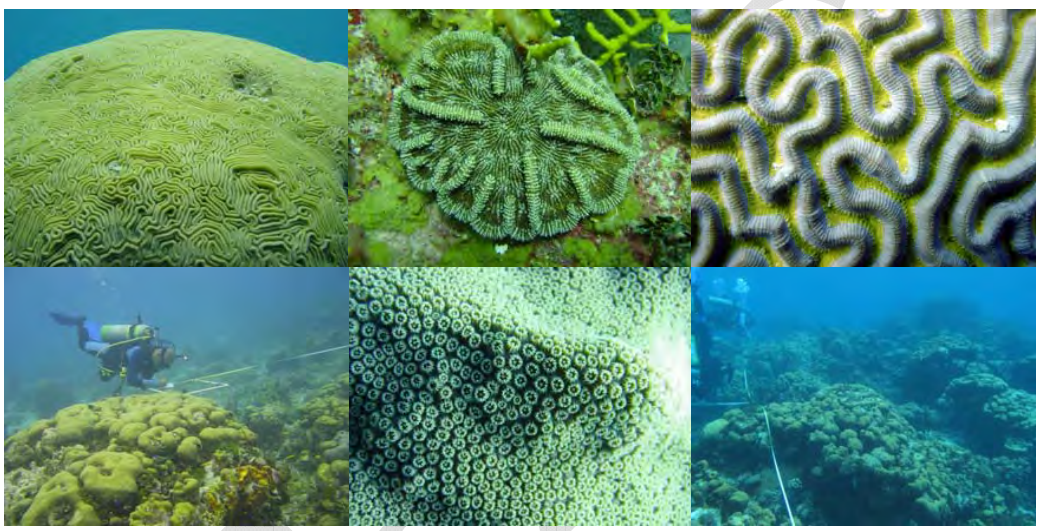

Figure 7. Examples of the Roncador well developed coral reefs (Pictures taken in the 2003 scientific expedition).

Despite not being yet explored, it is expected to have also well developed deep corals in the abundant seamounts around Roncador and others atolls in the archipelago both because currents sweep away sediment, expose the hard substrate and encourages settlement of coral larvae, and because they provide plankton on which the corals feed. Good water mixing and, in certain cases, tolerance of high stress levels seem important in fostering resilience to bleaching and consequent mortality (Salm et al. 2000).

Being more than ten times bigger than Roncador, the Quitasueño atoll exhibited the highest coral cover throughout shallow habitats, whereas Serrana atoll presented an important extensive coral development. In general, the northern archipelago atolls presented the highest gorgonian density ever found in the Colombian Caribbean with up to 22 colonies m^2 (compare to Sánchez 1999, Sánchez et al. 1997 and 1998), as well as best developed fore-reef terraces from Serrana and Roncador, particularly, harbor among the most dense and abundant sea-fan zones as observed in 1995 (Diaz et al. 1996a; Sánchez, unpublished). In general, these northern atolls had between 43-46 species of reef-building corals and 38 species of octocorals (Sánchez et al. 2003).

Nonetheless, Zea (2001) noted that the sponge density in the archipelago was lower than in continental areas, possibly due to lower suspended matter in the oceanic banks.

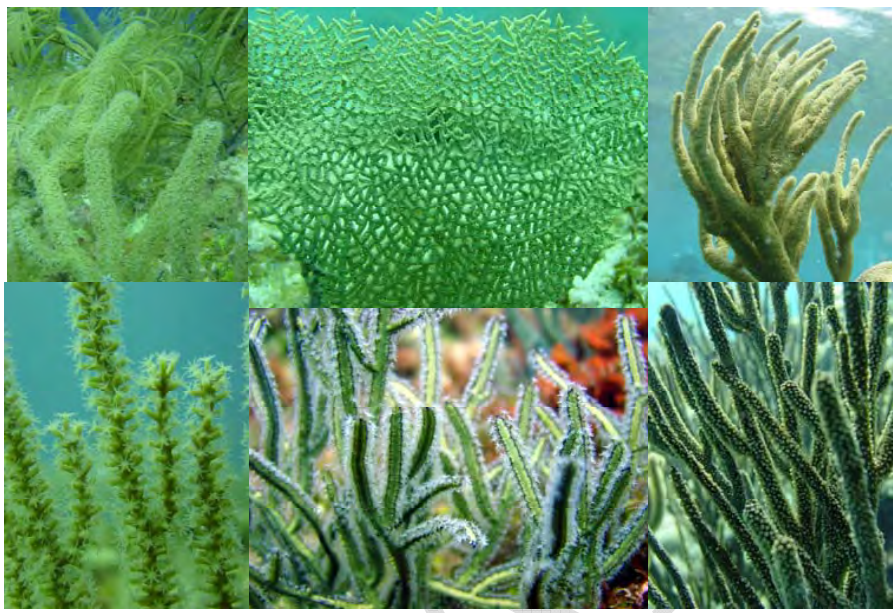

Figure 8. Examples of the Roncador abundant octocorals species. (Pictures taken in the 2003 scientific expedition).

The great abundance of octocorals includes the *Pseudopterogorgia elisabethae* a species being harvested in the Caribbean for the extraction of anti-inflammatory metabolites by the cosmetic industry (Mayer et al. 1998). This exploitation has brought economic benefits for local communities in the Bahamas. Some areas of Roncador and Serrana banks along the leeward margin especially at the drop-off edge presented significant abundance of this species (up to 2.4 col. m^2). *P. elisabethae* is present across the archipelago, and indeed Puyana et al (2004) extracted from it the pseudopterosin A-D a compound that had different characteristics from the ones E-L utilized in the Bahamas and Bermuda, with total concentrations two to three times higher. This chemical diversity is considered an adaptive value preventing predation and mediating ecological interactions in reef environments (Sammarco and Coll 1988).

Coral growth in the Colombian continental shelf is limited due to the paucity of hard bottoms, the presence of large rivers and the influence of upwelling waters. These reefs are highly affected by coral disease Garzón-Ferreira et al. (2001). For instance white band disease, as in many other Caribbean localities, has probably played a significant role in the collapse of *Acropora* spp. populations in Colombian reefs, which occurred during the first half of the 1980s (Garzón-Ferreira and Kielman 1994). White band affected 24 species of scleractinians and one milleporid in Colombian Caribbean reefs.

This number is similar to that reported recently for the Florida Keys, where 26 coral species were recorded to be affected by diseases in 1997 (Wheaton et al. 1998).

In comparison, Caribbean live coral cover is on the steady decline since more than three decades ago, primarily due to loss of the staghorn coral *Acropora cervicornis* presumably to white band disease at the ends of the 80s (Aronson and Precht 2000). Following coral degradation was experienced across the region in 1998, an event that impacted major reef species builders such as *Montastrea* complex species and opened up substrate for algal colonization and increasing susceptibility to disease, bleaching, and storm damage (Szmant 2002). Documentation of even further reef degradation by the replacement of once-dominant reef-building corals by other species, such as *Porites asteroides*, which do not contribute as much to reef construction has been recently acknowledge (McField and Kramer 2007).

Remote reefs did not escape from the region-wide reef decline. For instance, offshore Belizean barrier reef loss about 75% of its coral between 1971 and 1996, primarily due to loss of acroporids, but all species of corals declined while the cover by fleshy erect brown algae increased (McClanahan and Muthiga 1998). The increase in erect brown algae (*Sargassum*, *Turbinaria* and *Lobophora*) is being experienced in Belize over the past 18 years (McClanahan et al. 2000). For instance, Littler et al. (1987) and Aronson et al. (1994) reported how macroalgal cover went from <5% to over >60% at Carrie Bow Caye between 1980 and 1992. The algal bloom in remote reefs, with low fishing pressure is combined with the fact that *Diadema antillarum* were scarce there even in 1980 (Hay 1981).

However, not all oceanic atolls have suffered the same degree of reef degradation. In Glovers Marine Reserve exposed oceanic reefs the largely low-relief spur and groove formations (*Montastrea* spp., *Diploria* spp.) are in good condition, perhaps by the influences of the five reef crest channels that connect the ocean reef and lagoon habitats (Pikitch et al. 2005). In the Chinchorro Biosphere Reserve still there is living *Acropora* which accounts on average for 2.5% (9% max) of the bottom coverage, especially in southern regions (Vega and Hernandez 2007).

Accordingly with Wilkinson (2008), the Caribbean is home to 10% of the world's coral reefs, and the overall damages observed during 1998 and 2005 are the largest reported in history. Many of the 13 hurricanes affecting the Caribbean in 2005 caused considerable damage to the reefs via wave action and runoff of muddy, polluted freshwater but the effects were not all bad. In Puerto Rico the combined effect of the 2005 bleaching event and subsequent epizootics, led to a failure of sexual reproduction in *Acropora* and *Montastraea* species in 2006 (Ballantine et al. 2008). Indeed, coral cover at 13 permanent coral stations across the Puerto Rico insular shelf, including those oceanic sites in Desecheo and Mona Island, loss around 50% of its living tissue during the bleaching event of 2005 (Garcia-Saiz et al. 2007).

These two years were also the world's hottest years since records began in 1880 and resulting in about 16% of the world's reefs lost to coral bleaching in the Indian Ocean and Western Pacific in 1998 Wilkinson (2008).

Most recent regional analysis of the coral condition is summarized in Table 1.

Table 1. Updated summary of the coral condition across the Caribbean region.

Country	Average % coral cover	Observations	Trend	Author
Bermuda	20	bleaching, hurricanes and coral diseases	Low changes	Creary et al 2008
Bahamas		*Montastraea annularis*, *Agaricia agaricites*, *Porites porites*, and *Porites astreoides* colonies were absent in 2004.	Drop from 13% to 3% between 1991 and 2004	Creary et al 2008
Cayman Islands	16	*Montastraea* decreased while *Agaricia* and *Porites* increased.	no changes in the cover of fleshy macro-algae.	Creary et al 2008
Dominican Republic		no data are available after the damaging hurricane season in 2008	cover has almost doubled from 2004 to 2007	Creary et al 2008
Puerto Rico	10-15	severe massive regional coral bleaching event during August through October, 2005	Reductions of live coral cover up to 59%, A proportional increase of cover by turf algae was typically observed	Garcia-sais et al. 2008
US Virgin Islands	5-9	51% of live coral cover was bleached	Steadily decreased, lowest value in July 2006. Highest value of 37% in 2001	Rothenberg et al, 2008
Jamaica	15	rebounded from 5% in the early 1990s.		Creary et al 2008
Turks and Caicos	9–16	high levels of algae at many places with no land influences	Lower in shallow inshore sites than deeper offshore.	Creary et al 2008
MX	26		algal abundance was less than 25% in 2004.	Garcia-Salgado et al 2008
Belize	11	1998 bleaching and hurricane disturbances	84% of coral cover seen in 1993 dropped to 66% in 1995	Garcia-Salgado et al 2008
Guatemala	9	sediment resistant coral species such as *Siderastrea sidereal*. non-coralline macroalgal cover of 65%	values that were similar in 2006	Garcia-Salgado et al 2008
Honduras	12	Significant impact of Bleaching and hurricane Mitch	Drop of the 28% on the Bay Islands in the early 1990s.	Garcia-Salgado et al 2008

Reef degradation in the Caribbean is not recent. In 1983, a lethal disease outbreak rapidly killed almost 98% of *Diadema* urchins throughout the Caribbean, in what is considered to be the most severe and significant mass mortality for a marine organism in modern times (Lessios et al 1984). This significant loss of *Diadema* has contributed to a shift in many coral reef communities from coral dominance to macroalgal dominance. In an example, Liddel and Ohlhorst (1992) were able to determine in Discovery Bay,

Jamaica that two years after the *Diadema* die-off the mean macroalgal cover increased from 20.5% to 56.9%.

In response to algal overgrown (Figure 9), McClanahan and Muthiga (1998) and McClanahan et al (1999) noticed the rapid increase in the abundance biomass of herbivorous fishes such as the blue-headed wrasse *Thalassoma bifasciatum* (Labridae), the blue tang *Acanthurus coeruleus* (Acanthuridae), and the spotlight parrotfish *Sparisoma viride* (Scaridae). They also reported that bites and aggression rates were more pronounced on the reef center, which originally contained the most algae and exhibited the lowest levels of herbivory, than on the edge positions of the reef.

In areas where overfishing is happening there has been also a reduction in the numbers and sizes of herbivorous fishes (Hughes 1994). An example is the case of Belize, Jamaica and Puerto Rico suffering by algal surplus and therefore severely altered coral growth, fecundity, and recruitment, and responsible for the net reductions of live coverage (Tanner 1995, Williams et al. 2001, Szmant 2002, Garcia-Sais et al 2007).

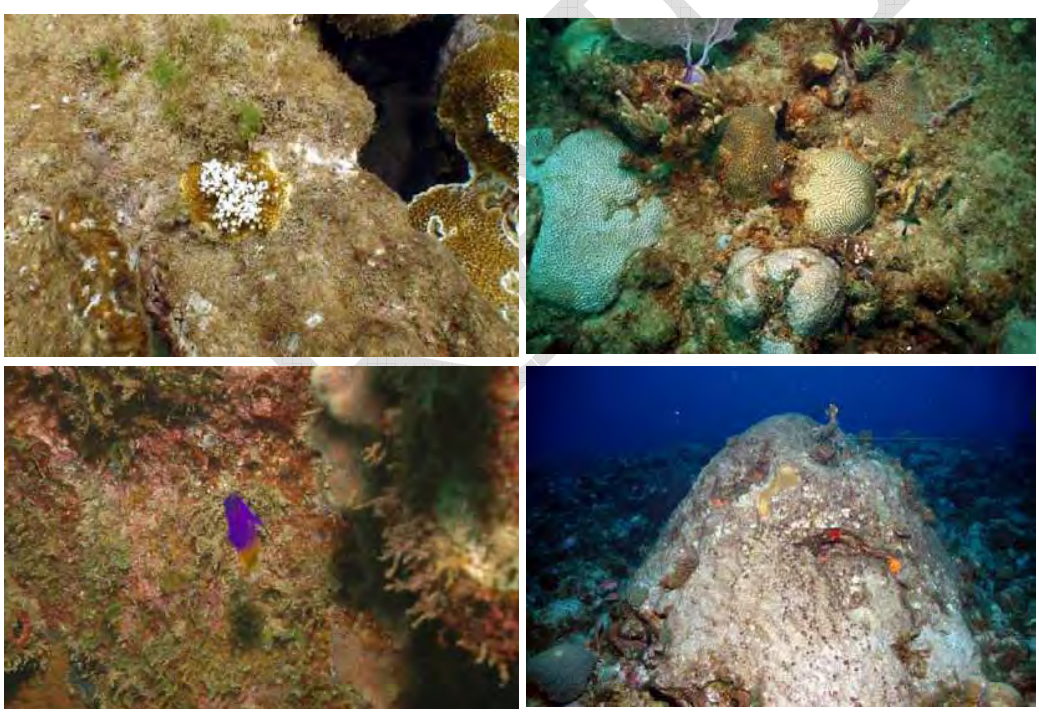

Figure 9. Algal overgrowing corals in Puerto Rico (taken from García-Sais et al. 2007).

The maintenance of balanced fish communities associated to local reefs, selectively fish predating on week corals is still rare. In Bonaire, it is known that parrot-fishes prey on corals causing scars and mortality (Rotjan and Lewis 2005), while in the Great Barrier Reef the blennies negatively influencing the survival of young coral recruits.

Another mass mortality experienced in the Caribbean happened to the sea fan (*Gorgonia ventalina* and *G. flabellum)*. It was reported during the 1980s in Trinidad y Tobago (Laydoo 1983), Costa Rica (Guzmán and Cortes 1985), Panamá (Garzón-Ferreira and Zea 1992). Nagelkerken et al (1997) hypothesized that a reduction in the swaying motion of sea fans at more protected sites and at greater depths facilitates attachment and establishment of suggests that in the wider spread of the disease resulting in higher infection rates and consequent tissue loss. This event was not seen in the Roncador well spread sea fans (Diaz et al. 2000).

Ecosystem malfunctioning reflects also because of the mass coral reef bleaching a phenomenon that increase its frequency during the last two decades and are unprecedented within this century and probably for several preceding centuries (Hoegh-Guldberg 1999, Aronson et al. 2000). The mass bleaching have been shown to be exacerbated by the increase in the water temperature (2 to 4˚C) but also has been associated to subaerial exposure during unusually low tide (Glynn 1993), increased penetration of visible and UV light (Gleason and Wellington 1993), and decreased water circulation (Nakamura and van Woesik 2001).

On the other hand, the uncontrolled growing of the tourism industry across the Caribbean region is imposing new threats to the coastal and marine environments (NOAA 2000, GESAMP 2001). The associated increase in urban development has increased suspended sediments and eutrophication into the coral reefs systems. For instance, high turbidity levels observed in Puerto Rico 's coastal waters were describe as major causes of reef degradation (Acevedo and Morelock 1988; Burke and Maidens 2004; García-Sais et al. 2005). Increases in turbidity reduce light penetration and limit its availability for photosynthesis by zooxanthellate corals and algae (Souter and Linden 2000) and consequently, for their normal growth and survival (Kinzie et al. 1984). In an another study, turbidity was a strong predictor of percent live coral cover on coral along the southwest coast of Puerto Rico and Mona Island, but when considering this relationship on fish communities it was more complex, despite that fish biomass, abundance, and species richness were all reduced as turbidity increased (Bejarano 2006). This is the situation not only in Puerto Rico, but in most Caribbean places, at the point the sediments from terrestrial runoff represent a major threat to Caribbean reefs (Rogers 1990, Burke and Maiden 2005, García-Sais et al. 2005). Tourism not only affects reefs and its ecosystem services, but also threats nesting beaches. Around 43% of all nesting beaches reported for the Wider Caribbean plummeted from 6,400 in 1999 to fewer than 2,400 by 2004, representing a 63% decline in five years (Abreu-Grobois et al 2004).

The Caribbean region is a high transited area by cargo and passenger ships (Figure 10). The intense boat trafficking generate additional marine-based sources of pollution, including oil discharge and spills, sewage, ballast and bilge discharge, and the dumping of other human garbage and waste from ship, are a cause for great concern in the Caribbean region (Burke and Maidens 2004).

Examples of these threats are: a) extensively seafloor damage with ship anchorage; b) releases a toxic mix of oil, nutrients from ships; c) potential contribution to invasive species, and other pollutants; d) releases a significant

amount of oil into the environment from boats routine maintenance and washing; e) generation of over 2,000 gallons of oily bilge water a day (Sweeting and Wayne 2003), and one megaton of garbage each day (Mohammed et al. 1998) by cruise ships.

The Reefs at Risk analysis identified that about 15 percent of the reefs in the region are threatened by marine-based sources of pollution. Many of the region's small islands, such as St. Lucia, Montserrat, St.Kitts and Nevis, the Netherlands Antilles, Bermuda, and the Virgin Islands had threat levels estimated at high (Figure 11).

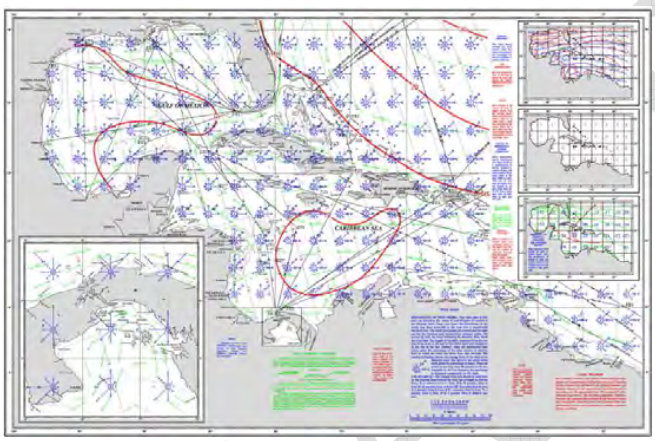

Figure 10. Pilot char of Caribbean boat traffic, denoting low use of the Seaflower BR. (taken from: http://www.nga.mil/MSISiteContent/StaticFiles/NAV_PUBS/APC/Pub106/106nov.pdf)

The comparison of reef condition at global scale might be not possible because the data set incompatibility and the availability of few local observations, or because they are anecdotal or simple ad hoc correlations.

Ecological changes now documented in living coral reefs are unprecedented in the geological history of reefs (Ginsburg 1994, Hughes 1999, Jackson 1997, Pandolfi et al. 2003, Wood 2007). However, coral differences were not as great 25 years ago as it is today. In fact, the dominant corals in the Pleistocene are the same taxa that dominated Caribbean sites until the early 1980s when the effects of overfishing forced major changes in the community structure of living reefs (Hughes 1994, Jackson et al. 2001, Pandolfi et al. 2003). The past 25 years might have been the most degrading and disruptive to reef coral communities in their entire Caribbean history.

Figure 11. Map of the coral risk in the Caribbean. (Taken from Burke and Maidens 2004).

In conclusion, the Seaflower MPAthe well developed coral reefs and in particular the ones in Roncador atoll escaping the coastal and urban development stresses, with low fishing pressure, with low corals and gorgonians disease, with not tourism activities, with strong oceanic conditions and high recovery rates denoting themselves as a remarkable example of reef integrity, meeting the criteria to be nominated as world heritage site (Salm et al. 2000). However, they are still prone to suffer the effects of global climate change, disease and potential increase in fishing activity as its surroundings are becoming over-exploited.

Therefore, the protection of local coral populations is essential for population resilience and to prevent extinction (McCormick 1999, Pizarro 2002, Orozco 2006, Pizarro 2006, Abril and Bolaños 2007). It is believed that oceanic reefs in exposed locations under frequent storms regimes avoid the nutrients, sediments and detritus accumulation which are either flushed out to sea or transported to the back reef areas where nutrients normally accumulate and support algal communities.

VI. The Hotspot of Biodiversity

The coral dominated marine communities living in the Seaflower BR has not yet been completely explored, but progressive improvements in the biodiversity studies is happening in the last decade. Currently, a total of 46 coral-reef building species, 40 octorals species, 118 sponges species, 163 macroalgae species, 140 invertebrate species, 190 reef fish have been reported (Díaz et al. 1996, Sanchez et al. 1997, Diaz et al. 2000, Pizarro

2002, Sánchez et al 2003, Dahlgreen et al. 2003). Initial surveys to characterized bycatch increased the number of deep water fishes such as 4 new Caribbean reports for chimeras, and the potential for a new chimera species (Caldas 2006).

Marine species are being studied for medical applications, and at least one new toxic compound (Clionaiminpirrolidina or 5S-2- imino- N-metil pirrolidin carboxílic acid) was identified from more than 150 substances produced by the incrustant sponge *Cliona tenuis*. The compound is responsible for bacterial inhibition and inflammatory process and currently medical application of these properties are being analyzed (Castellanos et al. 2006).

Mangrove stands are not extensive (total coverage of 250ha), but have rich maturity and developed into structured forests. They provide habitat, food and refuge to a wide variety of marine and coastal fauna and flora. Among them are the 11 species polychaetes associated to its roots and newly recorded for the Colombian Caribbean sea from San Andres and Old Providence mangrove roots (Londoño et al. 2002) found five genera and.

Seagrass stands cover around 4.6% of the Colombian benthic habitats (Diaz et al. 2003) and are not an abundant habitat in the Seaflower BR. It has been estimated that only 400ha (0.9% of the insular shelf) in San Andres and 1,603ha (3.7% of the insular shelf in Old Providence) is present. Seagrass in other southern and northern atoll are limiting habitats and are represented with four species *Thalassia testudinum, Syringodium filiforme, Halodule wrightii* and *Halophila decipiens* two less compared with mainland benthic habitats.

From CARICOMP monitoring conducted by CORALINA in the last nine years, total seagrass biomass is higher in the dry season (first semester) with values ranging 200 and 1,500 g/m^2/day compares in the rainy season with values ranging from 150-400 g/m^2/day (Bolaños et al. in press). There were not seasonal differences in the leave production rate among islands or seasons (2,0 - 4,3%). Seagrass productivity located in the lower values compared with other CARICOMP stations across the Caribbean.

Seagrass receive the impacts of the human activities such as increasing propellers scars, occasional dredges, terrigenous sediments after heave rains or manual removal to open spaces for tourists, particularly seen in the San Andres island.

Benthic habitats in the archipelago are important refuges for threaten species. Among them are the Caribbean monk seal (*Monachus tropicalis*) last seen in Serranilla in 1952 and declared extinct in 2008; the nesting colony of tropical shearwater (*Puffinus lherminieri*) last seen in the small crab key in 1950; the abundance of black crabs (*Gegarcinus ruricola* and *G. lateralis*) still abundant in the populated islands despite its disappearance or significant reduction in most Caribbean islands; the nesting beaches for hawksbill, green, and loggerhead sea turtles in all of the archipelago atolls specially in Serrana and Serranilla (Figure12).

Figure 12. Threaten species looking refuge in the Seaflower BR. Queen conch (*Strombus gigas*), elkhorn coral (*Acropora palmata*), hawksbill (*Erethmochelys imbricata*), black grouper (*Mycteroperca bonaci*).

The San Andres Archipelago was declared in 2004 as an Important Area for Bird Conservation (AICA). Indeed 22 resident marine birds species belonging to seven families (Procellaridae, Pelicanidae, Sulidae, Phalacrocoracidae, Fregatidae, Laridae and Stercoariidae), with six nesting species on oceanic unpopulated sand/rocky cays reported in Roncador and Serrana since 1941 and 1986 (Ortega 1941, Chiriví 1988). Around other 76 migratory beach birds belonging to 4 families species visit regularly these islands (Bond 1950).

Information on the sea birds of these remote atolls is sparse and corresponds to short censuses usually conducted many years ago by foreign researches. To counteract this information gap CORALINA organized recent monitoring campaigns (Mow et al. 2000, Moreno et al. 2003a and 2003b, Lasso and Giraldo 2004, García unpublished, McCormick unpublished).

Updated information confirmed the permanency of resident sea birds colonies occupying the reduced space available on small and oceanic cays of the Seaflower MPA and BR (Figure 13). It has determined that nesting birds are abundant only in two cays, the bird cay in Serrana and the Roncador cay, and these northern cays concentrate the maximum abundance of birds belonging to Laridae family, with a population estimated in 324 individuals in the former and 140 in the later (Lasso in press).

Resident birds accounted for 69% of the sea birds with the remaining 31% being migratory species. Sea birds in the southern atolls are mostly migratory, and unlike the northern ones that are piscivorous, they prefer the leaves of the sandy vegetation seen in the dunes (Suriana maritima and Tournefortia gnaphalodes). They form conglomerates and can get taller than 3m (Díaz et al. 1996a). Specifically in Roncador cay around 690 sea birds belonging to five orders, 13 families and 21 species.

Sea birds are frequently affected from tropical storms and hurricanes which deeply perturb their habitats and reduce populations. Indeed, in 2007, Hurricane Felix caused the disappearance of *Sterna fuscata* and *Anous stolidus* nesting colonies and their nesting habitat in the largest cay in the Serrana atoll (Lasso in press). Hurricanes can also affect the sea bird populations by altering their migratory routes (Thurber 1980, Wiley and Wunderle 1993, Torres and Leberg 1996).

Figure 13. Sea birds observed in oceanic cays during recent censuses.

The existence of the sea birds in oceanic unpopulated cays producing significant amount of guano in the northern atolls was the reason why United States of America initiated the claim of these territories. In fact, the guan was exploited by them for many years as registered in the Fifth George Vanderbilt expedition (Bond and Meyer de Schauensee 1944). Following this exploitation the sea birds populations were quickly depleted. For instance, nesting colonies of *Sula leucogaster* in Serrana were estimated in 15,000 individuals in 1941 (Ortega 1941), and reduced to only 33 individuals in 1969 (Ben-tuvia and Ríos 1970). Currently marine bird populations appear to recovery (Taylor 1994, Roselli 1998, García and Lasso 1999, McCormick 1999, Riascos 1999, Machacón and Ward 2001, Moreno and Devenish 2003, Lasso and Giraldo 2004). Therefore conservation management policies in place proved success, but require perhaps even stronger measures for large degree of recovery.

On the other hand, the largest islands have developed a dry forest currently considered as well maintained secondary forest, mostly in Old Providence Island. This vegetation is progressively increasing, from 788 ha in 1944 to 1,114 ha in 2000 explaining because the forestation rate is higher than the deforestation rate (Ruiz et al. 2005).

The dry forest in Old Providence Island is comprised by around 374 species distributed between 93 families and 7 pteridophytes (Lowy 2000). 14 new registries were recently reported by Ruiz et al. 2005. However, the present flora are relicts of the primary forest presented in historical times. Parsons in 1964 reported that generosity of the native forest in Old Providence provided high quality woods during the XVIII century.

Associated to terrestrial vegetation are several endemic/rare species: 1 bird (*Vireo Caribaeus* currently considered critically threaten), 2 snakes (*Leptotyphlops albifrons* and *Coniophanes andresensis*), and 1 aquatic turtle (*Kinosteron*). Not as many as continental areas, but proportionally relevant considering that emerged land is less than 60km^2.

In comparison, shallow water reef diversity in other Caribbean regions particularly the shallow-water communities of western Atlantic coral reefs is similar in diversity and abundant (Kinzie 1973). For example, in the Mesoamerican Reef region (Mexico, Belize, Guatemala, Honduras) there are around 67 reef- building species of corals.

The diversity, natural history and conservation status of elasmobranchs along the Caribbean is poorly known, including those which inhabit the Mesoamerican Barrier Reef, the second largest barrier reef in the world (Pikitch et al 2005). In his work in Belize inshore areas were identified as early life-stage habitat for sharks. Overall, nurse sharks *Ginglymostoma cirratum* had the highest relative abundance (57.8% of catch), followed by

Caribbean reef sharks *Carcharhinus perezi* (32.3%), southern stingrays D. Americana (5.6%), Caribbean sharpnose sharks *Rhizoprionodon porosus* (1.8%), lemon sharks *Negaprion brevirostris* (1.2%), silky sharks *C. falciformis* (0.06%) and a Galàpagos shark *C. galapagensis* (0.03%).

In Brasil, shark abundance and activity was along least disturbed by human activity areas (Garla et al 2006). They suggested that *Carcharhinus perezi*, is one of the largest and most abundant apex-predators inhabiting reef systems throughout the tropical Western Atlantic. The species to use quite small territories, but various habitats through ontogeny and having no apparent seasonal variations in movement patterns, thus is a species prone to benefit from conservation management regimes (ie. MPA).

Azooxanthellate (deep-sea) stony corals in the Caribbean it is being estimated 99 to 129 species of stony corals, gorgonians, soft corals, stylasterids, black corals, lithotelestid, sea pens, antipatharia, with the greatest diversity of species found at 200-350 m in depth (Dawson 2002, Lutz and Ginsburg 2007). The primary framework builders of reefs at depths of 70-105 m off Jamaica are sponges (sclerosponges) as reported by Lang et al. (1975).

The diversity of Caribbean reef communities have limited number of species in any assemblage at one location (between 40 and 60 species), perhaps due to restrictions of dispersal and recruitment (Budd 2000, Pandolfi and Jackson 2007). Regional generic diversity is recovery after two Cenozoic turnover events, and appears to have strong correlation with the size of the dispersal pool and spacing between populations (Rosen 1984). The Plio-Pleistocene turnover event took 5 to 10 Myr to recover full species richness (Johnson et al. 1995).

It is possible that living Caribbean reefs have a very low resilience to further anthropogenic disturbances, since they are already in a state of diversity recovery, and has been honed by successive and selective adaptations to a series of cooling events that favor the dominance of cold-tolerant species with long generation times. Such a fauna may not be well prepared for a future scenario of rapid global warming (Precht and Aronson 2004). Supporting this theory are the recent studies of Holocene reef history indicating unprecedented changes in modern coral reef assemblages have recently occurred throughout the Caribbean (Lewis 1984, Aronson and Precht 1997, Greenstein et al. 1998, Pandolfi 2000, Aronson et al. 2002, Pandolfi et al. 2003). They found that Pleistocene species distribution patterns are different from present-day ones, and major changes were seen mostly during last 25 years.

In conclusion, the biodiversity within the Seaflower BR and in Particular in Roncador atoll are good examples of the Caribbean regional diversity, and because of it less altered conditions the habitats here serve as refuges for several species. Still a great proportion of the local diversity remains to be explored offering a new opportunity for the advance of the scientific knowledge and understanding of ecological process in shallow and deep waters.

VII. Connectivity Patterns

The diverse marine ecosystems present in the Seaflower MAP and BR (corals, mangroves, seagrasses, reef lagoons, algal beds, soft bottoms, beaches) have kept not only their healthy conditions, but also the interconnectivity between them and among the surrounding deep water areas. Connectedness between the insular environments with proximate continental ones was proved with the work on coral larvae (Pizarro 2006). She demonstrated the Seaflower BR is a potential source of planulae for Central America (Nicaragua, Costa Rica and Panama), as well as for the Colombian continental Caribbean corals.

On a completely different subject, the functionality and importance of connectivity in the San Andres archipelago was proved by Marquez et al. (in revision) working with the Caribbean threaten species *Strombus gigas*, the queen conch. By analyzing six polymorphic microsatellite loci they explored the population genetic structure at six atolls and three Colombian continental reefs. They differentiated three stocks: (1) San Bernardo Island(continental area), (2) Roncador, Quitasueño, Serrana and Providence (northern areas), and (3) East-South-East, South-South-West atolls, Rosario Islands and Tortugas bank (southern areas). Similarly, genetic differences in archipelago populations from the northern and the southern areas were seen between populations of the zoanthid *Palythoa caribaeorum* in Providence Island and San Andres Island (Acosta et al. 2008).

Márquez et al (in revision) identified the key role in connectivity of the queen conch at Roncador and Serrana based on three observations: (1) they present high values of genetic diversity and population densities, (2) Roncador showed gene flow with continental Islands and (3) they are located in strategic position to exchange among west and northeast Caribbean.

These studies support the hypothesis of gene flow between southern sites (Rosario, Tortugas Islands) and northern sites (Roncador, Quitasueño) which were related to the key role of oceanographic patterns in structuring populations in those sites (Marquez et al in revision). The combination of the short and long dispersal may depend on the interaction between topography and eddies which create important retention-expulsion mechanisms (Andrade et al. 1996). Similar processes have been recently identified in Barbados, Mexico and Cuba Caribbean sites (Cohen et al. 2006).

Retention-expulsion mechanisms explain why several reef fish species spawn offshore, allowing their larvae the return to nursery grounds located in shallow, inshore waters. This reproductive style appears to maximize the probability of survival through the planktonic phase and has been well documented for some species of coastal fishes in the tropics, including the Sphyraenidae, Gerreidae, Carangidae, Serranidae, and Lutjanidae (Böhlke and Chaplin 1968, Johannes 1978, Domeier and Colin 1997).

The prevalent gene flow has profound consequences for species recovery, deriving predominantly from local source populations but also influencing regional processes. Therefore protecting the northern atolls such as Roncador, it will result in a regional conservation strategy. Indeed a significant queen conch population recovery was

measured after only three years of closure of the fishery. Roncador was able to increase adult density from 145 conch/ha in 2003 to 258 conch/ha in 2007 (148 conch/ha more), a positive impact that was measured gradually in down current atolls of Serrana (60 conch/ha more) and Quitasueño (31 conch/ha more) as they depart from Roncador (Figure 14).

Queen conch recovery have not being seen on the southern atolls with moderate levels of fishing pressure, neither has been seen in most Caribbean places, despite the ban of the fishery for more than a decade (Theile 2001; Catarci 2004; Delgado et al. 2004, Ballesteros et al. 2005,).

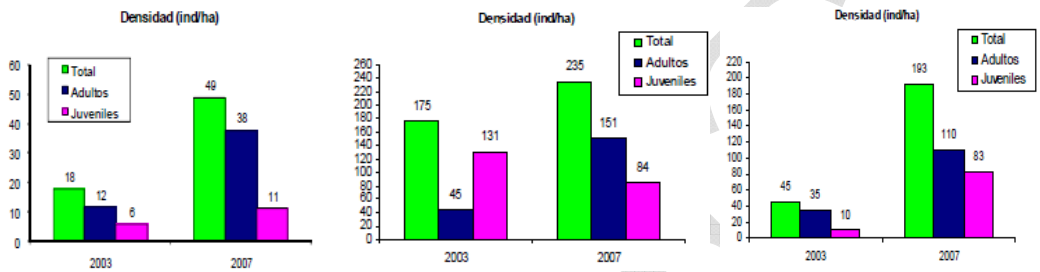

Figure 14. Recovery of the queen conch following three years of closure. From left to right, Quitasueño, Serrana and Roncador. (Taken from Casto et al in press.)

On biogeographical fish study, Acero (1985) presented an alternative of the Brigss 1974 theory, by considering the existence of a two Caribbean provinces, one in the north and another in the southern. The separation of these sub-provinces it is proposed to happen at 12.5˚N (north of San Andres Island).

Ecological connectivity has been proven to occur across the Caribbean eco-region with several species. The most recent case is the well document invasion of the alien Indopacific lion fish (*Pterois volitans* and *P. miles*) which was first introduced off the Florida waters in the early 1990s from local Aquarius or fish lobbyist. These fishes have rapidly spread across throughout the Bahamas and northern Caribbean (Whitfield et al. 2007, Hamner et al. 2007, USGS Non-indigenous Aquatic Species Database 2009). Green and Coté (2009) documented how density of lion fish increased 18 times in New Providence, Bahamas in only two years. Predators of this species in the Caribbean are not well known, but have been seen in stomachs of groupers and other lion fishes (Fishelson et al. 2007).

The impacts of this invasion are generating great concern, as individual lionfish have been shown to reduce recruitment of Bahamian native fish by 79% on small experimental reefs (Albins and Hixon 2008). Given the high densities noted in some northern Caribbean places, the impacts of lionfish on natural reefs are expected to be extreme.

In the southern San Andres archipelago, so far only single lion fish has been sighted, in fact the first report was done in December 2008 from Providence Island, and two weeks

later from San Andres Island. There is not information about the presence of the species in the northern archipelago atolls, but there are scientific expedition being organized in 2009. CORALINA is begin the development of a strategy to initiate an integrate management strategy to counteract this threat.

As new scientific information become available, there is increasing understanding of the role of reef connectivity in the Caribbean given the wide variety of local gyres combined with ocean major circulation patterns which are leading to the definition of new eco-regions, in many cases covering several national jurisdictions (Paris et al. 2002, Colin 2004) Therefore new management approaches are needed in order to take common decisions affecting common resources since biodiversity and fisheries are dependent on upstream larval supply (Cowen and Paris 2006).

In conclusion, functional genetic and ecological connectivity is happening in the Seaflower BR and in proved in particular in Roncador. The phenomena is perhaps the key for the sub-regional biodiversity and productivity,

VIII. Fishing Considerations

The fishing activity in the Seaflower BR plays an important role in the islands production including economic, social, and cultural points of views, and also contributes to the food security. Commercial fishing takes place at industrial and artisanal levels, exploiting the spiny lobster (*Panulirus argus*), the queen conch (*Strombus gigas*) and a variety of demersal (snappers, groupers) as well as pelagic stocks (bonito, dolphinfish, jacks, kingfish, among others).

The most recent stock assessment of the spiny lobster indicated this valuable resource to be full exploited in response to highly regulated fisheries management (Figure 15). In fact, negative trends observed around 2003 are slowly being reversed due to diminishing in fishing efforts and the establishment of a close season (Sladek-Nowllis et al. 2008).

The queen conch is perhaps the fishery with longest history in the Seaflower BR (more than 50 years). Highest production was seen in 1993, with landings of 500mt. The production in the following decade gradually decreases to levels around 80mt, a trend also caused by even stricter fisheries regulations than those applied to the lobster fishery. Three years of complete ban of the conch fishery lead to a recovery at the northern atolls, but not experienced at the southern ones, since fishing really was not stopped (Figure 16). Roncador, Serrana and Quitasueño are currently among the Caribbean reefs with largest queen conch densities registering more than 200conch/ha (Castro et al in press).

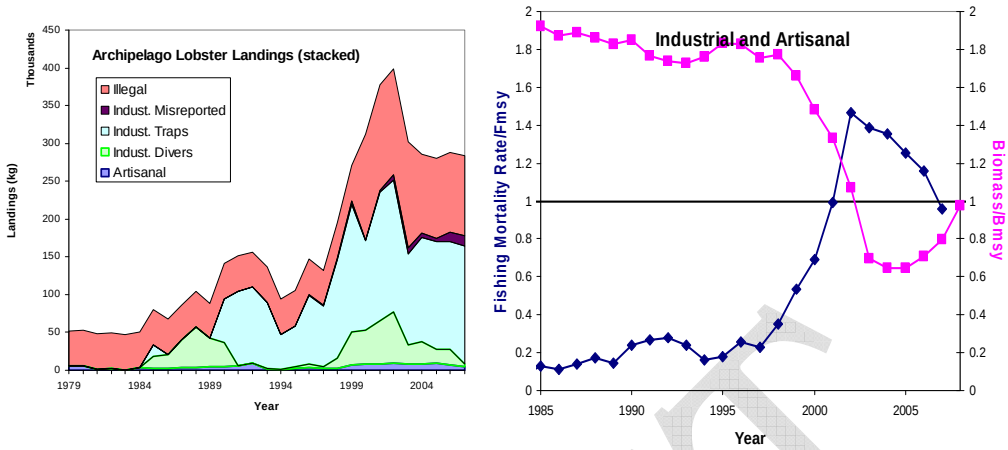

Figure 15. Full exploitation of the spiny lobster within the Seaflower BR. (Taken from Sladek-Nowlis et al. 2008)

Figure 16. Recovery of the queen conch in the northern atolls of the Seaflower BR. A ranching project to increase reproductive output within MPA no-take areas.

The fish exploitation is a multi-species (more than 65 species) and multi-gear operation (traps, diving, single lines, long lines, among others). All netting fishing gears are prohibited and indeed they were never common. Fish production between 2001 and 2005 was around 400-500mt, but decreased in the following two years to less than 300mt due to a reduction in fishing effort.

Unfortunately, there is little information about the specific composition of the fish landings, but still more than 60% of industrial landings correspond to snappers and groupers. In contrast, artisanal landings are capturing mostly for large oceanic pelagic species (36%), coastal pelagic contributed with another 27%. Artisanal production between 2004-2007 was stabilized around 100-110mt (Medina 2004, Castro 2005, Bent 2007).

Sharks have not been traditionally fished, but have been incidental species. Their industrial production remains unknown, but artisanal landings have been estimated in 2mt of entire trunks. Between2001-2004, three industrial fishing vessels fished sporadically for sharks and captured around 80-85mt was studied by Ballesteros (Ballesteros 2007). His study found that more of the 70% were comprised by Caribbean reef shark (*Carcharhinus perezi*) and nurse shark (*Ginglymostoma cirratum*), from which juvenile captures were

around 54%. A total of 13 sharks species were captured with longlinges. This negative impact of this fishing on benthic habitats along with the conflicts with the MPA zoning was then the basis for the prohibition of any directly oriented shark fishery (ICA Resolution 3333 from September 24, 2008).

In comparison, fishing in the Caribbean is open access with very few regulations and the location and distribution of the fish relatively predictable (Burke and Maidens 2004). Fishermen typically target the largest fish on the reef. The fisheries of the Caribbean are based upon a diverse array of resources and are conducted at industrial, artisanal and recreational levels. Of greatest importance are the fisheries for offshore pelagics, reef fishes, lobster, conch, shrimps, continental shelf demersal fishes, deep slope and bank fishes and coastal pelagics. Shrimp is of considerable importance in the Guianas-Brazil sub-region, and in Honduras and Nicaragua. The fisheries of the Guianas-Brazil sub-region have the highest percentage of discards, mostly as by-catch of shrimp trawling.

Recreational fishing for large pelagics (billfishes, wahoo and dolphinfish) is an important but largely undocumented contributor to tourism economies, particularly in the Insular Caribbean. This creates an important link between shared living marine resources and tourism, but this aspect of shared living marine resource management has received minimal attention in most Caribbean countries (Mahon and McConney 2004).

In the Caribbean, mariculture is not as important as in some other tropical regions, such as Southeast Asia. Overall landings from the main capture fisheries rose from around 70 000 tonnes in 1975 to a peak of 110 000 tonnes in 1985 before declining to around 90 000 tonnes in 2003 (CLME 2007).

The open access of many reef fisheries, with few and poorly enforced management regulations have resulted in the declining of the Caribbean major stocks. Over-fishing not only reduces the amount and size of species harvested, but is also leading to a major ecosystem shifts in reef community structure as a whole (Roberts 1995), thus affecting the overall abundance, composition and demography of the targeted species. Changes in fish community structure are accelerating processes associated with bioerosion of the coral structure which in turn result in algae overgrowth, and lower habitat quality.

The depletion of larger fish leads to a reduction in the average size of the targeted species, and can cause fishermen to fish for lower valued species, removing even more components of the coral reef food web (McManus et al, 2000). The removal of certain species can also significantly alter the reef structure. For example, herbivorous fish are responsible for controlling algae growth on the reef. If these fish are removed from the system, algae can flourish and reduce coral cover (Bohnsack 1993). In the long run, overfishing can degrade reef resilience to outstand other threats such as pollution and increasing natural disturbances.

The Reefs at Risk analysis identified 60 percent of the region's reefs as being threatened by overfishing (Burke and Maidens 2004). Reefs that are located close to shore, such as in the Eastern Caribbean, are often the most threatened systems, as there are often a number of fisheries competing in a small area. Reefs located far from shore, such as in parts of the

western Caribbean and Cuba, were assigned a low threat level. In support of these findings, many scientists agrees that overfishing is the most persistent and extensive threat across the Caribbean region (McField and Kramer 2007). With the decline of coastal resources there is growing fishing pressure on offshore fisheries resources, some of which are already considered to be fully or overexploited.

Fishing was the cause of why several species are currently under global protection, such as the case of sea turtles. For example, the loss of turtles to feed people on Jamaica eventually led to heavy overfishing of other species and by the early 1970s, it was "accepted as an established fact" (Jackson 1997: S29). Fisheries in Jamaica have never recovered, a situation that began centuries earlier (Keegan et al. 2003) and is not unique to the island, but it seen region-wide.

In conclusion, there are not evidences of the archipelago's stocks depletion mostly due to the limits imposed on the fishing efforts, the increasing conservation policies and the broader participation of stakeholders in co-management. In addition, species recovery programs for some of the threaten species, such as the queen conch, are currently a successful ongoing experiences. However, still there is need for improvement in counteract illegal fishing exercised mostly by fishermen from neighboring countries, using fishing techniques that are not allowed in Colombia and causing tremendous damages to the human health, as the case of the miskito divers in the region.

IX. Cultural and Economical Characteristics

The islands of the Seaflower MPA are characterized by its high cultural diversity. Differentiated from any other place in Colombia, native communities are Anglo/puritan African heritage, protestant religious in tradition and English speakers (English derived dialect shared with most countries in the Western Caribbean). Since the new Colombian constitution in 1991 (Art. 310), the territory and its native people (also known as "raizales") obtained legal recognition as an ethnic minority. Cultural groups from many places in mainland Colombia and from more than 10 countries have also established on the islands on a permanent basis, and they communicate mostly in Spanish. The islands' remoteness meant that for centuries the community had a high degree of autonomy, controlling their own resources and economy until the latter half of the 20th century.

The population in San Andres island went from 5675 inhabitants in 1952 to around 80,000 by 1992, making it the most densely populated island in the whole of the Caribbean (Vollmer 1997). This is not the case in the other two inhabited islands (Old Providence and Santa Catalina), which are characterized by much lower increases, not reaching the 6000 total inhabitants. Human population continues on the rise in absolute numbers, but with the new population control a regime, the growth rate is now reduced (Howard and Taylor 2008).

The local population now has worst indices of poverty than 20 years ago. The National Statistics Office in Colombia (DANE) indicates that people with basic living necessities increased from 33,31% in 1993 (lower than the national average 35,8%) to 40,9% in 2005, a lot more than the national average (27,7 %).

To overcome or reduce the negative impacts generated by the over-population seen in San Andres Island, CORALINA defined the level of land property (CORALINA 2008), and is developing an integrated population police in accordance with the Biosphere Reserve principles. It is also looking at alternative livelihoods to help conserve while offering better quality of life to its inhabitants, particular the natives groups.

Islands economy are closed related to the tourism development, a currently accounts for more than 22% of its internal production rate with an average of 300.000 tourists every year (Tourism Secretariat 2008). Most tourists stayed around the main islands (San Andres and Providence), and less than 1% visiting the closer atolls in the southern, while there is not tourism in the remote northern atolls.

The Caribbean is a region known for the large number of culturally, politically and socio-economically diverse countries (26) and dependent territories involved and their wide range of living resource management capacities. The population distribution varies considerably throughout the region. In 2001, the population of the Caribbean Sea region was around 74 million, with 82 per cent in Colombia and Venezuela, 13 per cent in Central America and Mexico, and 5 per cent in the Small Islands (CLME 2007). Taking into account the population growth rate for each country in the Caribbean Sea region, it is expected that the number of inhabitants would be close to 89.2 million in 2020 (Source: GIWA Caribbean Sea Assessments; data for Aruba, Cayman Islands, Guadeloupe, Martinique, Montserrat, Netherlands and Antilles; Turks and Caicos are not included).

In addition, almost all the countries in the region are among the world's premier tourism destinations, providing an important source of national income. Annually, the region is visited on swells of tourist seasons by the influx of millions of people, mostly in beach destinations. Indeed accordingly with the Caribbean Tourism Organization in 2008 more than 35 millions visited the countries in the Region, and increase of more than 4 millions in five years (Table 2). To supply the demands of this growing industry there has been also an increase in tourism investments which lead to important land use changes in coastal areas and the destruction of natural coastal habitats, to a point that is tourism is considered nowadays the most significant threat by many of the region's stakeholders (McField and Kramer 2007).

These statistics showed the greatest increases in the Mexican State of Quintana Roo with 4.7 millions of extra visitors (more than 5 times) in the last five years, especially because of tourists arriving in cruises. However, these numbers can be even higher since visitors from Cancun were not included. McField and Kramer (2007) reported that Cancun only received 10.8 million visitors arriving by cruise ships.

The economy of some countries in the Caribbean region depends almost entirely on their marine ecosystems which are important for the economic of their resources as well as for their scenic value. Birkeland (1996) estimated 375 billion US dollars depend on the living resources and services across. For example, in the Bahamas marine resources maintain a GDP of US$ 2.7 billion through tourism and harvest of marine resources (Buchan 2000).

If coral degradation continues, by 2015 the loss in gross revenues could be close to US$300 million per year from fisheries, and to US$600 million from tourism. Within the next 50 years there would be additional loss in gross revenue due to declining in reef services as shoreline protection which can be in the order of US$140-420 million and net benefits in total could be reduced by US$350-870 million (Burke and Maiden 2005).

Table 2. Tourist flow in the Caribbean accordingly with the Caribbean Tourism Organization between 2003 and 2008 (http://www.onecaribbean.org/).

Destination	Period	2008		2003	
		Stop over	Cruises	Stop over	Cruises
Dominican Republic	Jan-Dec	3,979,672	417,685	2,677,082	218,993
Cozumel (MX)	Jan-Dec	2,569,433		293,515	277,516
Cuba	Jan-Dec	2,348,340		62,674	
Cancun (MX)	Jan-Dec	2,165,320		184,777	
Jamaica	Jan-Dec	1,767,271	1,088,901	1,350,284	1,132,596
Bahamas	Jan-Dec	1,259,189	2,861,140	641,906	2,970,174
Puerto Rico	Jan-Dec	1,213,192	1,127,040	1,013,168	938,918
US Virgin Islands	Jan-Dec	678,904	1,757,067	618,703	1,773,948
Aruba	Jan-Sep	622,675	556,090	182,423	470,049
Barbados	Jan-Dec	563,118	597,523	1,428,599	467,848
Martinique	Jan-Dec	479,933	87,079	405,128	286,218
St.Maarten	Jan-Dec	397,493	1,024,178	427,587	34,317
British Virgin Islands	Jan-Dec	345,934	571,749	64,176	178,699
Cayman Islands	Jan-Dec	302,879	1,553,053	1,768,759	1,818,979
St.Lucia	Jan-Dec	295,761	619,680	276,948	785,706
Bermuda	Jan-Dec	291,431	286,409	171,709	192,648
Trinidad & Tobago	Jan-Jul	267,317		303,788	
Curacao	Jan-Sep	266,164	226,905	1,690,799	246,976
Antigua & Barbuda	Jan-Dec	265,841	580,853	46,915	220,308
Belize	Jan-Dec	245,027	597,370	474,248	482,023
Dominica	Jan-Jul	236,424		66,252	96,105
Grenada	Jan-Dec	123,770	292,712	117,758	95,063
Bonaire	Jan-Oct	62,101	175,702	213,297	
St.Vincent and Grenadines	Jan-Aug	60,156	67,536	28,137	33,477
Anguilla	Jan-Dec	53,077			
Guyana	Jan-May	38,590		87,256	
Suriname	Jan-Feb	23,450			
Saba	Jan-Dec	12,043		7,808	
Montserrat	Jan-Dec	7,360	251	5,966	
St.Eustatius	Jan-Jul	7,146			393,262
Turks and Caicos Is.	Jan-Mar			47,198	
Total		18,379,578	17,058,356 0	14,656,860	13,113,823

In conclusion, the Seaflower MPA propose site having yet any tourism threats and not included in the path of most boat traffic is perhaps among the unique places within the Caribbean that can be preserved for its natural values and in

the future have the opportunity to be managed as an exceptional example of sustainable development. People here (residents and visitors) living in a territory where 99.9% are oceanic environments, rely heavily on marine resources, with livelihoods and culture depending on the productivity of the marine habitats and the species they support.

Small islands are then critical because marine foods are independent and often the inverse of island size. As we have Keegan et al (2008) demonstrated analyzing Grand Turk, Carriacou, Middle Caicos, and several cays, small islands are not necessarily resource impoverished compared to larger islands. In fact, the inverse seems to be true. The associated bank system of island and shallow marine habitats will support a density and diversity of marine resources based on the spatial scale, complexity, and availability of nutrients.

X. Historical Values

The geographic location of the Seaflower BR was in the path of the historical Caribbean maritime transit and trade routes. Galleons transit the area suffered hurricanes impacts from which very little is yet known, thus there is a great potential to have historical yet not well known historical values. In a recent study Garcia et al. (2007) found evidences that four galleons and a ship transiting the northern archipelago atolls were impacted by a hurricane on November 6th 1605. Two of them and the ship arrived in Jamaica highly impacted from Bajos de las Víboras, Serrana and Serranilla, and the two remaining galleons were lost.

As this example, historical events and remains are part of the Colombian patrimony, and by definition part of the universal value. Submerged patrimonial artifacts open interesting challenges about the legal rights, the property, and the historical and aesthetic values.

XI. Legislation Framework and Management Strategies

The Seaflower BR is a region with unique legislation framework in Colombia, because it is the only insular territory, posses a minority population, it's the country northern frontier, and has developed new conservation and resource management regulations, taken as a national example. Among these unique strategies are the existence of functional marine protected areas, regional parks, and independent fishing board. However, in the territory also implemented all national policies and programs such as national parks, fishing administrations, mineral deposits, and cultural and maritime regulations.

Local institutions, such as CORALINA, despite its youth have been recognized as strong and efficient organization because of their dedication and achievements. For instance the declaration of Seaflower BR after only five years of existence and five years later the declaration of Colombia first MPA, the largest in the Caribbean region, and among the largest in the World, supported by broad community participation speaks by itself.

Progressive advances have been able to implement having these management strategies. For instance, significant progress in obtaining local, national and international support its being demonstrated with the advances in the co-management approaches for fisheries management. New and significant efforts have been allocated to: a) reduction in fishing effort for the queen conch and lobster fisheries; b) ban of the shark fishery; c) the involvement of users in fisheries decision-taken; and d) drafted management actions plans for key species (shore and sea birds, lobster, sharks, and conch) which are currently under adjustment and approval; and e) maintenance of monitoring programs on coral reefs, seagrass, mangroves, sea birds, reef fishes, beaches, water quality, fisheries landings, and special surveys for queen conch and lobsters, and socio-economic variables.

The conservation policies are addressed primary in the field of population and development. These include links between environment and development; equality, equity, and empowerment of women; integration of population into sustainable development policies and programs; poverty alleviation; access to reproductive health care and family planning; role of the family; right to education; situation of youth and children; and needs of indigenous people. The principles reaffirm that human beings are at the center of sustainable development and that sustainable development requires that the inter-relationships between population, the environment, and development be recognized, properly managed, and brought into a harmonious balance.

In recognition of the ecosystem balance, CORALINA is currently working harder to increase the level of protection of particular areas with remarkable ecological role and resources, and is in this sense that the establishment of the unique world heritage site within a significant area of the Seaflower MPA is now an institutional priority. No other place in this eco-region has the marine World Heritage Status to account for extension and remoteness of complexity oceanic ecosystems, with e high level of biodiversity but also with high vulnerability that challenge management.

The challenges created by the high population of the archipelago considered to be a major obstacle to the advance of the sustainable development model is also an incentive to develop several fronts under a responsible ecosystem based management approach. Therefore, new projects, new partners, new enforcement agreements, new educational curriculums, more effective communication strategies are all being funneled towards the same objective, the conservation of functionality and productivity of this important Caribbean unique region.

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Annex 49

DESCRIPTION OF THE PROCEDURE AND SCIENTIFIC RIGOUR EMPLOYED BY THE CLCS

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DESCRIPTION OF THE PROCEDURE AND SCIENTIFIC RIGOUR EMPLOYED BY THE CLCS

Contents

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D. Insights into the *Modus Operandi* of the CLCS

DESCRIPTION OF THE PROCEDURE AND SCIENTIFIC RIGOUR EMPLOYED BY THE CLCS

1 . This Annex briefly describes the working of the CLCS in assessing a submission by a coastal State Party to UNCLOS . Specifically, it addresses the minimum scientific standard of proof that an OCS claim requires (A); the process which would need to be followed (B); and the scientific expertise and data that must be obtained and carefully analysed (C) . To place the issue in context, Colombia will also summarize the *modus operandi* of the CLCS using a past example from the practice of the CLCS (D) .

A. The Minimum Scientific Standard to be Applied

2 . The minimum standard of scientific methodology for assessing the existence and extent of an outer continental shelf is to be found in the "Scientific and Technical Guidelines of the Commission on the Limits of the Continental Shelf" (CLCS Guidelines), adopted by the CLCS on 13 May 1999 (as modified later) [1].

3 . Regarding said Guidelines, it has been stressed that:

[1] CLCS, *The Scientific and Technical Guidelines of the Commission of the Limits of the Continental Shelf*, UN Doc . CLCS/11, available at: http://www un org/depts/los/clcs_new/commission_guidelines .htm (last visited 17 Sep .2017) .

> "The procedure of the CLCS is complicated and time-consuming, but it is nevertheless appropriate when one bears in mind the scale of the interests involved."[2]

4 . The central importance of the Guidelines is also stressed therein:

> "With these Guidelines, the Commission aims also to clarify its interpretation of scientific, technical and legal terms contained in the Convention .Clarification is required in particular because the Convention makes use of scientific terms in a legal context which at times departs significantly from accepted scientific definitions and terminology .In other cases, clarification is required because various terms in the Convention might be left open to several possible and equally acceptable interpretations .It is also possible that it may not have been felt necessary at the time of the Third United Nations Conference on the Law of the Sea to determine the precise definition of various scientific and technical terms .In still other cases, the need for clarification arises as a result of the complexity of several provisions and the potential scientific and technical difficulties which might be encountered by States in making a single and unequivocal interpretation of each of them."[3]

5 . Magnússon states that:

> "the rules on procedure and the scientific and

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[2] B . M . Magnússon, *The Continental Shelf Beyond 200 Nautical Miles: Delineation, Delimitation and Dispute Settlement*, Brill, 2015, p . 68 (available at the Peace Palace Library) .

[3] CLCS Guidelines, para . 1 3; Magnússon, footnote 2 *supra*, pp. 44-45 .

> technical guidelines bind the Commission, the Commissioners and the submitting coastal state as long as the relevant provisions are not *ultra vires* or invalid for another reason .Consequently, they are formally subordinate to the rules contained in UNCLOS."[4]

He then concludes that the CLCS Guidelines can be said to represent an authoritative interpretation of Article 76:

> "It has been argued that the Guidelines 'come close to being an authoritative interpretation of the technical provisions found in Article 76'. Some go even further and state that the Guidelines are 'the first authoritative and details scientific and technical interpretation of article 76'. These views seem to be in line with the judgment in the *Bangladesh/Myanmar Case* which made references to the Guidelines when addressing the meaning of natural prolongation and the discussion above concerning who is bound by the instruments created by the Commission".[5]

6 . The same conclusion was reached by Suzette V .Suarez . Dr Suarez, founder of the Center for International Ocean Law, has explored the scientific and technical guidelines in her book *The Outer Limit of the Continental Shelf*. In the author's opinion, "the Guidelines contain the Commission's authoritative interpretation of Article 76 from a general point of view".[6]

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4 Magnússon, footnote 2 *supra*, pp .43-44 .

5 Magnússon, footnote 2 *supra*, p .45 .

6 S . V . Suarez, *The Outer Limits of the Continental Shelf: Legal Aspects of their Establishment*, Springer, 2008, p .125 (available at the Peace Palace Library) .

Suarez observes that, although Article 76 is a legal provision, "(t)he technical and scientific nature and requirements of the activity, (…), means that coastal states have little choice but to refer to the interpretation provided by the Commission in the Guidelines".[7] In this regard, the Guidelines reflect the minimum standard of assessment that the CLCS must follow .

B. The Technical Process Undertaken by the CLCS

7 . In this section, Colombia will review the process followed by the CLCS when examining submissions from coastal States, in order to show what is needed in order to achieve a sound scientific assessment .[8]

8 . The process begins when the CLCS includes the coastal State's submission on the agenda of one of its Plenary Sessions (because of the current backlog of submissions and the queueing system adopted by the CLCS, a coastal State will need to wait several years subsequent to making its submission before this happens) . The coastal State will then be invited to make a presentation on its submission before the CLCS . Once this has been completed, the CLCS proceeds to consider information

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[7] S .V .Suarez, footnote 6 *supra*, p .131 .

[8] The process is shown in graphical form in Section VII of Annex III of the Rules and Procedures of the CLCS (UN Doc . CLCS/40/Rev .1) available at: https://documents-dds-ny un org/doc/UNDOC/GEN/N08/309/23/PDF/N0830923 .pdf?OpenElement (last visited 17 Sep .2017) . For further details, see United Nations, Division for Ocean Affairs and the Law of the Sea-Office of Legal Affairs, *The Law of the Sea: Training Manual for Delineation of the Outer Limits of the Continental Shelf Beyond 200 Nautical Miles and for Preparation of Submissions to the Commission on the Limits of the Continental Shelf*, 2006 .

regarding any disputes related to the submission .If there are no disputes and the CLCS is in a position to proceed, it will generally establish a seven-member subcommission to examine the submission (Subcomission) .[9] Once the Subcommission has been established it becomes a semi-autonomous body, which provides reports on its work from time to time to the CLCS .The typical life-cycle of a Subcommission is from 2 to 3 years – the time which is generally required to complete its work and present its Recommendations to the CLCS .

9 . The Subcommission will initially conduct a preliminary analysis of the submission, including the verification of format and completeness of the submission and any clarifications which it thinks it requires from the coastal State . By this point, the assigned Division for Ocean Affairs and the Law of the Sea Geographic Information System (DOALOS GIS) officer will have assembled a GIS project for the submission so that the Subcommission can verify baselines, 200-nautical-mile limits, 350-nautical-mile constraints and other GIS data submitted by the coastal State .Based on this initial examination, the chair of the Subcommission will report back to the CLCS and provide an estimate of the time needed for examination of the submission and a preliminary timetable, which will also be communicated to the coastal State .

10 . In order to deal with Nicaragua's request, the Court would thus be required to ascertain whether the baselines

[9] If there are disputes, the matter is not taken further by the CLCS .

claimed by Nicaragua were properly established. Since the baselines are used to determine the 200-nautical-mile limit, they are instrumental to any examination which begins at the 200-nautical-mile limit. In case the CLCS is presented with inappropriate baselines, it would request the applicant to submit a revised submission incorporating proper baselines.

11. Such an interactive process is based on the cooperation between the States and the Commission with a view to correcting any deficiencies in a submission, and is entirely consistent with the nature, rules and procedures of this organ. It is Colombia's position that this is not compatible with the nature and *modus operandi* of a court of law. It would clearly be contrary to the judicial function of the Court to cooperate with Nicaragua in this regard.

12. After the preliminary analysis is complete, the Subcommission turns its attention to the main scientific and technical verification of the coastal State's submission, as explained in the following sections. So far as this process is concerned, the Subcommission will hold a series of working sessions to fully analyse and assess the contents of the submission. Individual members of the Subcommission will be assigned specific tasks by the Chair, depending on their area of scientific expertise.

13. As the examination proceeds, the Subcommission begins to draft a series of questions addressed to the coastal State where

it feels it needs further detail or where additional data or supporting arguments may be required . A number of meetings will be held with the delegates of the coastal State, where these matters can be addressed in a contradictory manner and where the Subcommission may begin to present to the coastal State its views on the submission . The submission can then be amended or completed . Towards the end of the process, which typically lasts several years, the Subcommission will draw together its views and draft the Recommendations to the coastal State . These will be communicated to the coastal State, which then has a chance to accept or propose modifications to the draft Recommendations. When this process has been exhausted, the Subcommission will draft and adopt its final Recommendations before presenting them to the plenary of the CLCS, composed of 21 experts in geophysics, hydrography or geology, elected on the basis of geographic representation by States Parties to UNCLOS for terms of five years . Before the CLCS begins its consideration of these Recommendations, the coastal State has the opportunity to appear before the Plenary and make a presentation on any matter relating to its submission .

14 . The CLCS' science-based analysis is not confined to the Subcommission . It is the CLCS that considers and ultimately adopts the Recommendations prepared by the Subcommission, with or without amendments . Examination of the Statements by the Chairman of the CLCS shows that the CLCS may make significant amendments to the Recommendations of the Subcommission before adoption . Once adopted, the CLCS will

communicate its Recommendations to the coastal State and also publish a Summary of the Recommendations on its website .

C. Required Scientific Assessment

15 . Numerous scientific methodologies and findings are necessary in order to address an OCS claim before the CLCS . These concern the natural prolongation of the land territory (1), the foot of the slope, both in terms of principles (2) and of methodology (3), and further technical assessments (4) .

(1) Natural Prolongation of the Land Territory

16 . As a crucial part of the process, the Subcommission will conduct a study of the morphological, geological and geophysical characteristics of the continental margin to establish if the coastal State's continental margin extends, uninterrupted, up to and beyond 200 nautical miles (*i.e.* that the coastal State has satisfied the Test of Appurtenance) .[10] Establishing that an OCS even exists is the first step, which is called the Test of Appurtenance .This is the gatekeeper for any application of the

[10] Originally envisaged as being part of the preliminary analysis of the submission, the Test of Appurtenance process may often only be completed during the main scientific and technical examination, due to the complexities of the issues involved. For example, the Subcommission for Côte d'Ivoire only accepted that the coastal State had met the Test of Appurtenance in February 2017, even though the Subcommission had been established in August 2016 and commenced its work in October 2016; see CLCS, *Progress of work in the Commission on the Limits of the Continental Shelf*, UN Doc . CLCS/98, para . 57, available at: https://documents-dds-ny un org/doc/UNDOC/GEN/N17/103/47/PDF/N1710347 .pdf?OpenElement (last visited 17 Sep .2017) .

rules of delineation,[11] and has been described as follows:

> "In claiming an extended continental shelf, or an area beyond 200 nm, the Commission requires that a coastal state first prove that the submerged natural prolongation of its land mass stretches beyond 200nm. Calling this the test of appurtenance, the Commission cites Article 76 paragraph 4(a). The test of appurtenance is designed to determine the legal entitlement of a coastal state to delineate the outer limits of its continental shelf throughout the natural prolongation of its land territory up until the outer edge of the continental margin."[12]

17. The test examines not only whether the coastal State has a natural prolongation beyond 200 nautical miles, but verifies that it is "morphologically continuous with or geologically connected to the land mass".[13] Suarez concludes that "(f)rom a legal point of view a test of appurtenance is clearly warranted. Such a test requires the coastal State to prove that the claimed continental shelf is the natural prolongation of its land territory".[14]

18. The CLCS examination includes a review of the current scientific publications on the area in question, with particular emphasis given to crustal studies (*e.g.* seismic refraction modelling), plate tectonic modelling, offshore drilling and sampling results, and offshore geophysical measurements

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11 S .V .Suarez, footnote 6 *supra*, p .149 .

12 S .V .Suarez, footnote 6 *supra*, p .148 .

13 S .V .Suarez, footnote 6 *supra,* p .148 .

14 S .V .Suarez, footnote 6 *supra,* p .148 .

including seismic, gravity and magnetic data. This is with a view to reaching agreement on the evolutionary process which led to the creation of the particular continental margin in question, and the case for natural prolongation.

19. Only if the Subcommission has been convinced by the coastal State, withstanding rigorous scientific scrutiny, that it has a natural prolongation of the continental shelf which extends, uninterrupted, up to and beyond 200 nautical miles from its baselines, will the Subcommission proceed to assess the outer limits.[15] Otherwise, if the coastal State fails to pass the Test of Appurtenance, "the outer limits of its continental shelf are automatically taken as 200nm".[16] The CLCS Guidelines stipulate that, in such a case, the CLCS is not "entitled by the Convention to make recommendations on those limits."[17]

(2) The Principles Underlining the Determination of the Foot of the Slope

20. The search for the base of the continental slope is carried out by means of a two-step approach. First, the search for its seaward edge should start from the rise, or from the deep ocean floor where a rise is not developed, in a direction towards the

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15 S. V. Suarez, footnote 6 *supra,* p. 148.

16 S. V. Suarez, footnote 6 *supra,* pp. 151-152; see also CLCS Guidelines, footnote 1 *supra*, para. 2.2.4 ("If, on the other hand, a State does not demonstrate to the Commission that the natural prolongation of its submerged land territory to the outer edge of its continental margin extends beyond the 200-nautical-mile distance criterion, the outer limit of its continental shelf is automatically delineated up to that distance as prescribed in paragraph 1").

17 S. V. Suarez, footnote 6 *supra,* pp. 151-152.

continental slope . Secondly, the determination of its landward edge starts from the lower part of the slope in the direction of the continental rise or the deep ocean floor . Some types of continental margins may require geological and geophysical data to assist in identifying the region referred to as the base of the continental slope . The morphology of different types of continental margins is the combined result of tectonic and sedimentary processes .

21 . In the present case, the Subcommission would have to assess all the geological, geophysical and morphological aspects of the area in an attempt to form a view on the nature of the margin and the case for natural prolongation . The bathymetric database used in the delineation of the foot of the slope in a Submission may include one, or a combination of, the following data:

- Single beam echo sounding measurements;
- Multi beam echo sounding measurements;
- Hybrid side scan sonar measurements;
- Interferometric side scan sonar measurements; and
- Seismic reflection derived bathymetric measurements .

22 . The geological and geophysical database used in the identification of the region defined as the base of the foot of the continental slope in a submission may include a combination of the following sources of data:

- In situ samples and measurements;
- Geochemical and radiometric data;
- Geophysical measurements; and
- Side scan imagery .

23 . The determination of the location of the point of maximum change in the gradient at the base of the continental slope is conducted by means of the mathematical analyses of two-dimensional profiles, three-dimensional bathymetric models, or preferably both . Generally speaking, however, the analysis of a Foot of the Slope (FOS) point (defined by the point of maximum change in gradient) will be carried out on 2-D profiles for practical reasons, as the typical software used is designed to work on 2-D profile data .

24 . Two problems of different origin often arise during the identification of the maximum change in the gradient: namely, the instability of the solution and the artificial smoothing due to orientation of the profile and the slope . The instability of the solution occurs because the combined effect of seabed roughness and numerical differentiation errors, which often make the second derivative a highly variable function .Filtering and smoothing can help .Artificial smoothing due to orientation of the profile and the slope occurs because the gradients of the slope and the rise, and their difference become smaller as the direction of the profile departs from a direction perpendicular to the isobaths .

25 . This analysis of the principles for the determination of the foot of the slope leads to several conclusions: (1) the FOS determination process involves the search for the base of the slope and the maximum change in the gradient; (2) difficulties exist due to the instability of the solution and the relative orientation of the profiles *vis-à-vis* the continental margin; (3) filtering and smoothing play important roles in the solution; (4) methodologies and uncertainties must be documented in a submission .

(3) The Methodology for Determining the Location of the Foot of the Slope

26 . Using the bathymetry data provided by the coastal State, and from other sources if necessary, the location of the Base of Slope Zone and individual Foot of Slope points presented by the coastal State will be duly analysed, verified and cross-checked . Whereas identification and verification of FOS points can be executed using specific software tools, identification of the Base of Slope Zone is usually a much more difficult task, especially where the character of the continental margin is atypical (only passive, so-called Atlantic-type margins conform to the UNCLOS Article 76 paradigm of shelf, slope and rise) . This calls for a thorough assessment of the nature of the continental margin, and may require specific bathymetric and high-resolution geophysical data to ascertain whether certain down-slope processes are present or not . For example, visual inspection of sub-bottom profiler data could be used to interpret the presence of down-slope slumps or debris flows, which are

processes of the slope and hence mark that area as being part of the slope and not of the rise . The excerpt in the footnote below is taken from the Summary of Recommendations for Norway to further illustrate some of the complexities involved .[18]

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[18] CLCS, Summary of the recommendations of the Commission on the Limits of the Continental Shelf in regard to the submission made by Norway in respect of areas in the Arctic Ocean, the Barents Sea and the Norwegian Sea on 27 November 2006, March 2009, paras .28-29:

> "28. The continental margin adjacent to the Nansen Basin between the archipelagos of Svalbard and Franz Josef Land is dominated by the Franz-Victoria Fan, one of a number of major glacio-marine, trough-mouth fans in the region that includes the large Bjørnøya Fan of the Norwegian Sea . During glacial periods these thick, aerially–extensive sediment wedges prograded from the land and shallow shelf areas of the Barents and Kara Seas into the surrounding deep ocean basins controlling the morphology of the continental margin .The Franz-Victoria Fan formed through the deposition of glacially eroded sediments that were transported to the continental slope via the Franz-Victoria Trough that was incised into the north-western part of the shallow Barents Sea shelf .
>
> 29 . As a result of the significant sediment supply, in the vicinity of the Franz-Victoria Fan the continental slope has an overall concave morphology with relatively low gradients .There is a near constant change in gradient from the upper slope to its base where it merges with the deep ocean floor of the Nansen Basin .Consequently, in this area, the location of the base of the continental slope is not readily identifiable solely on the basis of morphology . An important consideration of the Subcommission was to develop a consistent view on the general location of the base of the continental slope associated with glacio-marine fans related to the submission of Norway, in particular the large Bjørnøya Fan .Initially, the Subcommission expressed the view to Norway that there was insufficient geological and geophysical data to support the establishment of FOS point FOS ARCTIC 1 at the location submitted by Norway and, in the absence of such support, advised Norway to explore more landward possibilities for the foot of the continental slope associated with regionally significant inflection points in the gradient of the seafloor . Through a series of interactions, responses (NOR-PRE017-12-09-2008, NOR-PRE-018-12-09-2008, NOR-LET-025-07-11-

27 . It is not unusual for the Subcommission to recommend different FOS points than those initially claimed by the coastal State, based upon its own independent scientific analysis .[19]

2008, and finally NOR-DOC-026-07-11-2008) and other information (NOR-DOC-024-01-072008 and 025-01-07-2008 regarding the Bjørnøya Fan, NOR-PRE-014-09-092008, NOR-PRE-017-12-09-2008 and various publications), Norway indicated that it had located new high-resolution sub-bottom profiler data (Parasound) that was relevant to the consideration of the base of slope zone associated with the Franz-Victoria Fan and that supported a revision of FOS ARCTIC 1 to a more seaward position that Norway referred to as FOS ARCTIC 1 Rev in the documents above (note that this revised FOS point is now referred to as FOS ARCTIC 1 in Tables 1 and 2 of Annex I) . Based on the submission, and the additional data and material provided by Norway, the Subcommission agreed with the general approach adopted by Norway to define the base of the continental slope associated with the Franz-Victoria Fan, and the location of the revised FOS ARCTIC 1 . Critical elements to this agreement were the newly presented high-resolution, Parasound, sub-bottom profiler data; consistency with the base of slope location on the Bjørnøya Fan; and its location at a regional change in gradient at the base of the debris flow apron of the fan that is seen from the Parasound data to underlie all of the continental slope from water depths of more than 4000 m back to the shelf break."

Available at: http://www un org/depts/los/clcs_new/submissions_files/nor06/nor_rec_sum m .pdf (lastvisited 17 Sep . 2017) .

[19] At a Subcommission level, individual submissions foot of slope points, formulae calculations, constraints and outer limit points are revised at the request of the sub-commission as a matter of routine . Very few submissions, if any, avoid amendments during the Subcommission process . Also, it is possible that a submission is rejected in its entirety . This was the case of the UK submission with respect to the alleged continental shelf appertaining to Ascension Island . At a Commission level, of the 36 submissions examined by the CLCS to date, five were subsequently re-submitted as revised submissions at the request/suggestion of the CLCS (Russia (twice), Brazil, Barbados and Argentina) .

(4) FURTHER METHODOLOGIES

28 . Determining the extent of the rise requires analysis and interpretation of the seismic data on which this is based, and analysis and verification of the depth conversion methodology which has been used . This involves an examination of the interpretation of the seafloor and base of sediments/top basement on the seismic reflection data submitted (and from other sources if necessary) . The source of the velocity data (seismic stacking velocities, DSDP/ODP well data, seismic refraction data, etc .) also needs to be examined, and all depth/thickness calculations and error bars need to be checked and verified . Again, the footnote below contains an abstract from the Summary of Recommendations for Ireland to illustrate the approach of a Subcommission to this topic .[20] It shows that,

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[20] CLCS, Summary of the recommendations of the Commission on the Limits of the Continental Shelf in regard to the partial submission made by Ireland on 25 May 2005, 5 April 2007, paras .40-44:

> "Verification of seismic information and sediment thickness points 40 . Multichannel seismic reflection line PAD95-12 crosses both FOS 46 and outer limit fixed point FP 1 that was defined using the one per cent sediment thickness formula based on computations from FOS 46 . Similarly, multichannel seismic reflection line PAD95-13 crosses both FOS 50 and outer limit fixed point FP 2 that was defined using the one per cent sediment thickness formula based on computations from FOS 50 .The seismic data on lines PAD95-12 and -13 is of good quality and is appropriate for use in the determination of 1 per cent sediment thickness points .
>
> 41 .The reflection time to depth conversion for the PAD95 seismic lines was conducted using interval velocities derived from seismic stacking velocities using the Dix equation at each velocity analysis location . Ireland used a conservative approach in its time/depth conversion by

even in case where a conventional formula (the Gardiner formula) is applied, the scientific rigor of the assessment is plain .In this regard, the hierarchy in terms of quality of velocity data for depth/thickness conversion would be as follows:

- Borehole-derived velocities (from sonic log integrated with VSP/checkshot data) . Very, very sparse sampling density .

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choosing the interval velocity of the sedimentary section minus 10 per cent to estimate sediment thickness . A comparison between the measured sonic velocities on cores from DSDP sites in the region with the interval velocities derived from seismic profiles through the DSDP sites showed relatively good agreement despite the inherent problems involved in such comparisons . The Commission accepts that plausible stacking velocities and thus derived interval velocities were utilised by Ireland .

42. The Commission's analyses, verifications and checking of the velocity data and supporting information submitted validates the interval velocities employed by Ireland in the time to depth conversion, and its use in the determination of sediment thickness .

43. The Commission agrees with Ireland's conclusion that it can be established that there is a continuous sedimentary apron along the margin in the region of the sediment thickness points, and that continuity of sediments exists between the sediment thickness points and the relevant FOSs . Regional seismic and potential field data indicates that some small areas of basement outcrop at the seafloor on the seismic line between the sediment thickness point defining FP 2 and related FOS 50, are localised highs and do not disrupt continuity back to the FOS zone .

44 . The Commission agreed that Ireland's approach to the determination of the sediment thickness points is verifiable and acceptable ."

Available at:
http://www un org/depts/los/clcs_new/submissions_files/irl05/irl_summary_of_recommendations .pdf(last visited 17 Sep .2017) .

- Multichannel seismic data-derived interval velocities from stacking velocities using the Dix equation . Continuous samplingalong seismic lines .
- Velocity data from seismic refraction data . Generally, fairly sparse sampling density .

D. Insights into the *Modus Operandi* of the CLCS

29 . In this final section Colombia will show, through a case study, the complexity of the overall operation .

30 . Ireland was the first coastal State to publish in full the Recommendations of the CLCS with regard to its Partial Submission for the area abutting the Porcupine Abyssal Plain .[21] It provides insights into the inner workings of a Subcommission . This submission was for a relatively small and geologically similar part of Ireland's continental margin (only 6 FOS points were involved),[22] and yet the Recommendations reveal that

[21] See CLCS, Recommendations of the Commission on the Limits of the Continental Shelf in regard to the Partial Submission made by Ireland on 25 May 2005 on the Proposed Outer Limit of its Continental Shelf Beyond 200 Nautical Miles in the area abutting the Porcupine Abyssal Plain, 5 April 2007, available at: http://www un org/depts/los/clcs_new/submissions_files/irl05/irl_rec .pdf (last visited 17 Sep .2017) .

[22] For an example on a larger scale, the Summary of Recommendations of the CLCS on the submission made by Norway regarding areas in the Arctic Ocean, the Barents Sea and the Norwegian Sea on 27 November 2006, see footnote 18 *supra*, (a much larger submission than Ireland's partial submission regarding the area abutting the Porcupine Abyssal Plain) reveals that the Subcommission (which worked on the submission from April 2007 to March 2009) held 15 meetings with the Delegation of Norway, in which it posed 14 questions in writing, presented 6 preliminary considerations involving documents and PowerPoint presentations and one consolidated set

during the course of the consideration of the submission between August 2005 and September 2006:

- The Subcommission held a total of 42 meetings, including 8 meetings with the Delegation of Ireland .
- Ireland submitted additional material to the Subcommission on 16 separate occasions, and this material is listed in detail in Annex I of the Recommendations .
- The Subcommision posed a total of 25 written questions to the Irish Delegation (recorded in Annex II of the Recommendations) .
- Annex III of the Recommendations reproduces the answers and documents provided by the Irish Delegation in response to the questions posed by the Subcommission .

31 . In addition, although Ireland had acquired full-coverage multibeam bathymetry over its continental margin together with the requisite profiles, etc , the Subcommission took it upon itself to generate its own 3D (TIN)[23] bathymetric model from multibeam (corrected ping) and other data submitted by Ireland, and used that model extensively in its analysis and

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of views and general conclusions covering the whole submission .During the course of the examination of the submission by the Subcommission and the Commission, the Delegation of Norway provided additional material consisting of 34 documents (with enclosures), 25 PowerPoint presentations as well as 31 CD/DVDs .

[23] TIN (Triangulated Irregular Network), an alternative way to grid data .

recommendations .[24]

32 . This example demonstrates both the complexities involved in determining the location of the FOS (and hence the outer limits of the OCS), and also the lengths to which a Subcommission will go before concluding its analysis .

* * *

[24] See CLCS, Recommendations of the Commission on the Limits of the Continental Shelf in regard to the Partial Submission made by Ireland on 25 May 2005 on the Proposed Outer Limit of its Continental Shelf Beyond 200 Nautical Miles in the area abutting the Porcupine Abyssal Plain, footnote 21 supra, para .40 .

Annex 50

SUBMISSION TO THE CLCS IN RELATION TO 200NM ENTITLEMENTS OF OTHER STATES: AN ASSESSMENT OF STATE PRACTICE

Annex 50

SUBMISSION TO THE CLCS IN RELATION TO 200 NAUTICAL MILES ENTITLEMENTS OF OTHER STATES: AN ASSESSMENT OF STATE PRACTICE

Explanatory Note

The following table summarizes the results of an assessment of the practice of those States that have made submissions to the Commission on the Limits of the Continental Shelf and the manner in which these submissions affect the 200 nautical-mile entitlements of other States .

The table was prepared on the basis of the information available at the website of the Commission .

The submissions are presented in the order they have been made and -when applicable- processed by the Commission .

In the right column information as to the effect of each Submission on another State's 200-nautical-mile entitlement is presented . The following conventions were used:

N	Means that a Submission to the CLCS terminates at the 200 nm of another State or States
Not applicable	Means that there is no overlapping with the 200 nm of another State, for whatever reason (situations of States with adjacent coasts, coastal States facing open seas, etc)
Shaded cell	Means that a Submission crosses the 200 nm of the State or States mentioned .

	Submission (by State. Shaded where submission crossed 200M of another state, or states)	Configuration at 200M limit of another State? (N- submission terminates at 200M)
1	Russian Federation	**N**
1a.	Russian Federation - partial revised Submission in respect of the Okhotsk Sea	**N**
1b.	Russian Federation - partial revised Submission in respect of the Arctic Ocean	**N**
2	Brazil	Not applicable
2a.	Brazil - partial revised Submission - in respect of the Brazilian Southern Region	Not applicable
3	Australia	**N**
4	Ireland - Porcupine Abyssal Plain	Not applicable
5	New Zealand	**N**
6	Joint submission by France, Ireland, Spain and the United Kingdom of Great Britain and Northern Ireland - in the area of the Celtic Sea and the Bay of Biscay	**N**
7	Norway - in the North East Atlantic and the Arctic	**N**
8	France - in respect of the areas of French Guiana and New Caledonia	**N**
9	Mexico - in respect of the western polygon in the Gulf of Mexico	Not applicable
10	Barbados	Not applicable
10a.	Barbados - revised	Not applicable
11	United Kingdom of Great Britain and Northern Ireland - Ascension Island	Not applicable
12	Indonesia - North West of Sumatra	Not applicable

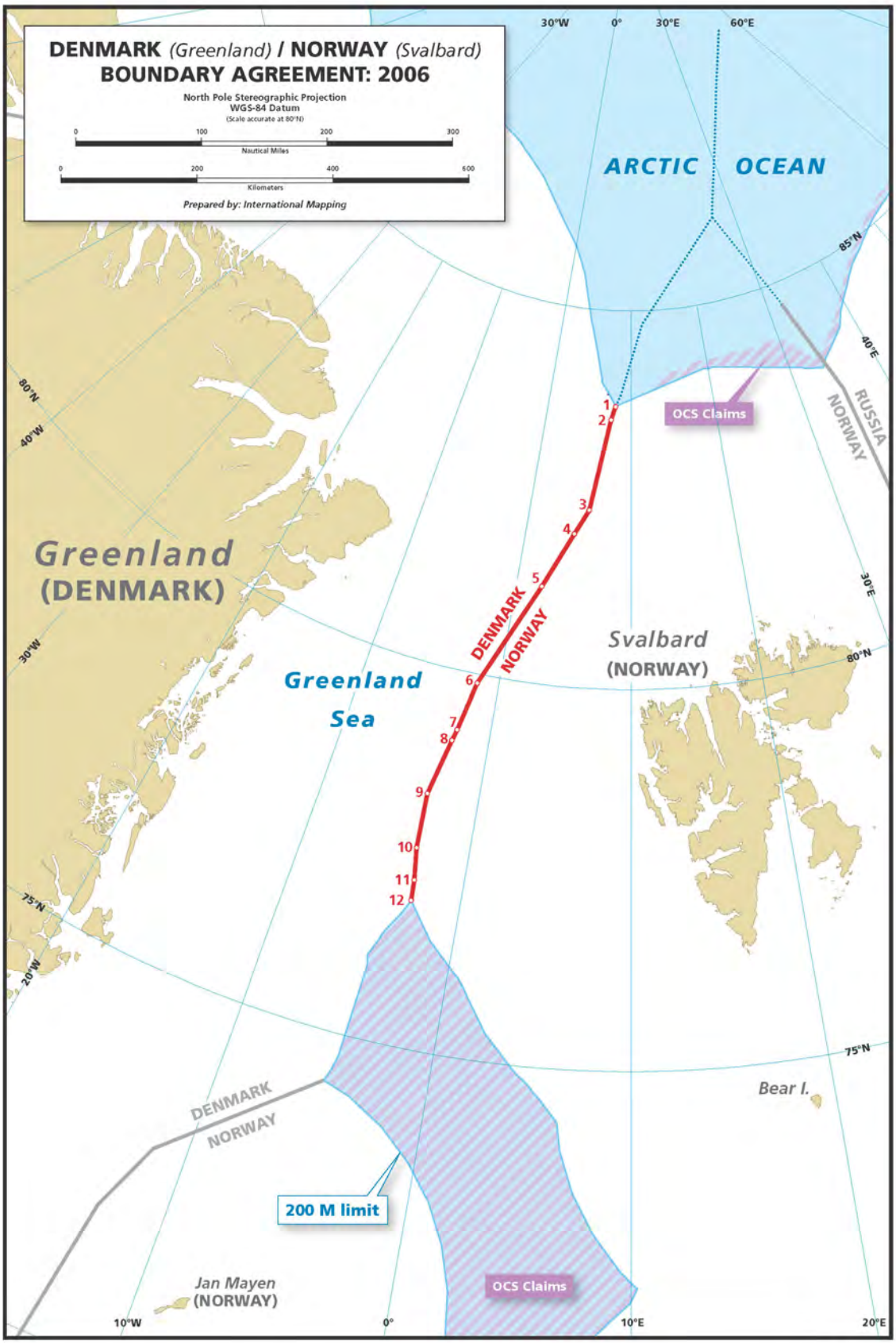
	Island	
13	Japan	**N**
14	Joint submission by the Republic of Mauritius and the Republic of Seychelles - in the region of the Mascarene Plateau	Not applicable
15	Suriname	Not applicable
16	Myanmar	Not applicable
17	France - areas of the French Antilles and the Kerguelen Islands	**N**
18	Yemen - in respect of south east of Socotra Island	**N**
19	United Kingdom of Great Britain and Northern Ireland - in respect of Hatton Rockall Area	**N**
20	Ireland - in respect of Hatton-Rockall Area	Not applicable
21	Uruguay	Not applicable
22	Philippines - in the Benham Rise region	Not applicable
23	The Cook Islands - concerning the Manihiki Plateau	**N**
24	Fiji	**N**
25	Argentina	Not applicable
26	Ghana	**N**
27	Iceland - in the Ægir Basin area and in the western and southern parts of Reykjanes Ridge	**N**
28	Denmark - in the area north of the Faroe Islands	**N**
29	Pakistan	**N**
30	Norway - in respect of Bouvetøya and Dronning Maud Land	Not applicable
31	South Africa - in respect of the mainland of the territory of the	Not applicable

	Republic of South Africa	
32	Joint submission by the Federated States of Micronesia, Papua New Guinea and Solomon Islands - concerning the Ontong Java Plateau	**N**
33	Joint submission by Malaysia and Viet Nam - in the southern part of the South China Sea	**N**
34	Joint submission by France and South Africa - in the area of the Crozet Archipelago and the Prince Edward Islands	Not applicable
35	Kenya	**N**
36	Mauritius - in the region of Rodrigues Island	Not applicable
37	Viet Nam - in North Area (VNM-N)	**N**
38	Nigeria	Not applicable
39	Seychelles - concerning the Northern Plateau Region	Not applicable
40	France - in respect of La Réunion Island and Saint-Paul and Amsterdam Islands	**N**
41	Palau	**N**
42	Côte d'Ivoire	**N**
43	Sri Lanka	**N**
44	Portugal	**N**
45	United Kingdom of Great Britain and Northern Ireland - in respect of the Falkland Islands, and of South Georgia and the South Sandwich Islands	Not applicable
46	Tonga	**N**
47	Spain - in respect of the area of Galicia	Not applicable
48	India	Not applicable
49	Trinidad and Tobago	**N**

50	Namibia	Not applicable
51	Cuba	Not applicable
52	Mozambique	**N**
53	Maldives	**N**
54	Denmark - Faroe-Rockall Plateau Region	**N**
55	Bangladesh	Not applicable
56	Madagascar	Not applicable
57	Guyana	Not applicable
58	Mexico - in respect of the eastern polygon in the Gulf of Mexico	Not applicable
59	United Republic of Tanzania	**N**
60	Gabon	**N**
61	Denmark - in respect of the Southern Continental Shelf of Greenland	**N**
62	Tuvalu, France and New Zealand (Tokelau) - in respect of the area of the Robbie Ridge	Not applicable
63	China - in Part of the East China Sea	Japan
64	Kiribati	**N**
65	Republic of Korea	Japan
66	Nicaragua - in the southwestern part of the Caribbean Sea	Panama, Haiti, Jamaica, Costa Rica and Colombia
67	Federated States of Micronesia - in respect of the Eauripik Rise	**N**
68	Denmark - in respect of the North-Eastern Continental Shelf of Greenland	**N**
69	Angola	Not applicable
70	Canada - in respect of the Atlantic Ocean	**N**
71	Bahamas	**N**
72	France - in respect of Saint-Pierre-et-	**N**

	Miquelon	
73	Tonga - in the western part of the Lau-Colville Ridge	**N**
74	Somalia	Yemen
75	Joint Submission by Cabo Verde, The Gambia, Guinea, Guinea-Bissau, Mauritania, Senegal and Sierra Leone - in respect of areas in the Atlantic Ocean adjacent to the coast of West Africa	Not applicable
76	Denmark - in respect of the Northern Continental Shelf of Greenland	**N**
77	Spain - in respect of the area west of the Canary Islands	**N**

FIGURES


DENMARK (Greenland) / NORWAY (Svalbard)
BOUNDARY AGREEMENT: 2006
North Pole Stereographic Projection
WGS-84 Datum
(Scale accurate at 80°N)
0 100 200 300
Nautical Miles
0 200 400 600
Kilometers
Prepared by: International Mapping
ARCTIC OCEAN
OCS Claims
RUSSIA
NORWAY
Greenland
(DENMARK)
Greenland Sea
DENMARK
NORWAY
Svalbard
(NORWAY)
Bear I.
DENMARK
NORWAY
200 M limit
OCS Claims
Jan Mayen
(NORWAY)
30°W
0°
30°E
60°E
85°N
40°E
80°N
40°W
30°E
30°W
80°N
75°N
20°W
75°N
10°W
0°
10°E
20°E
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11
12

Figure 3.1

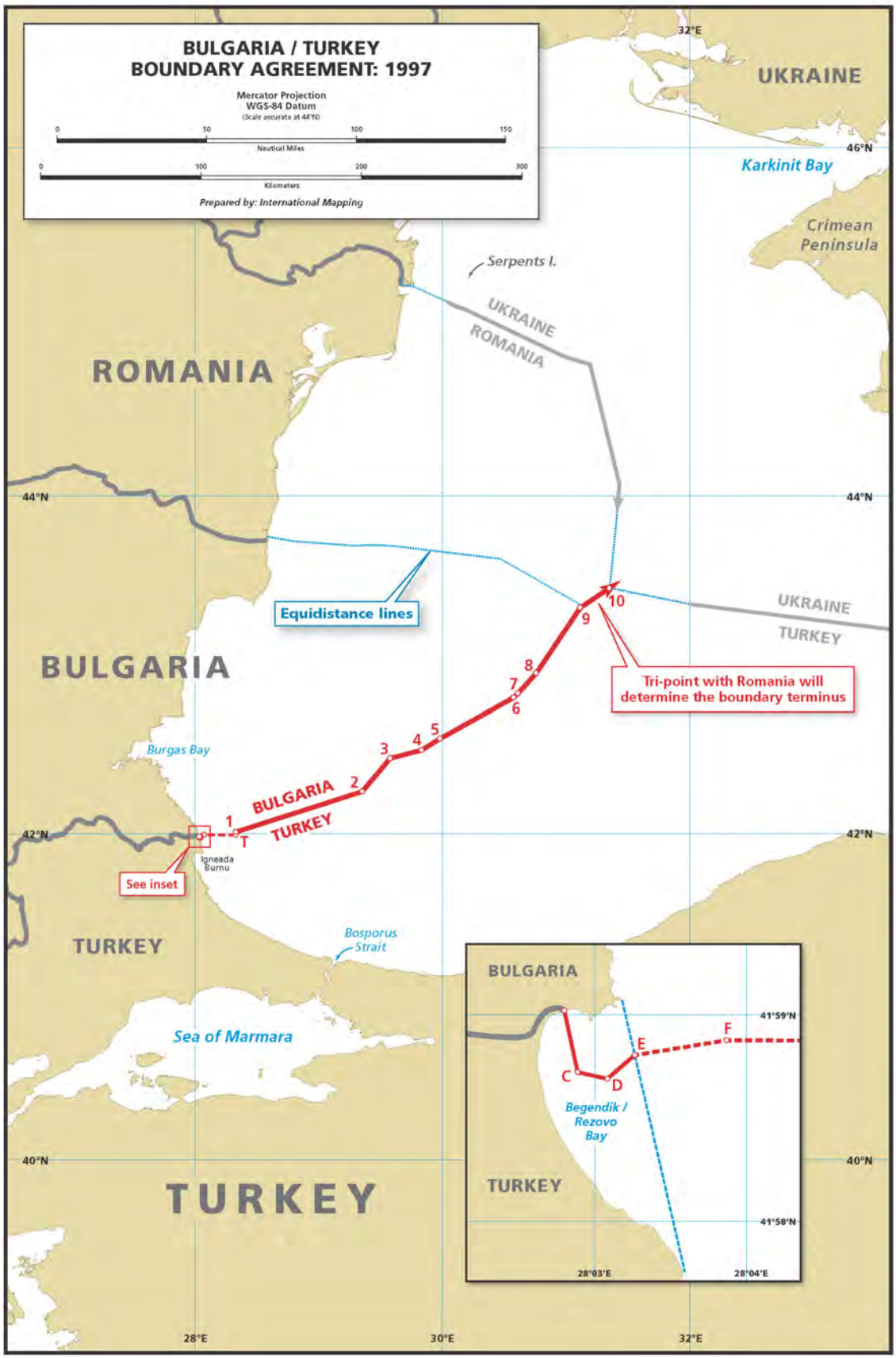
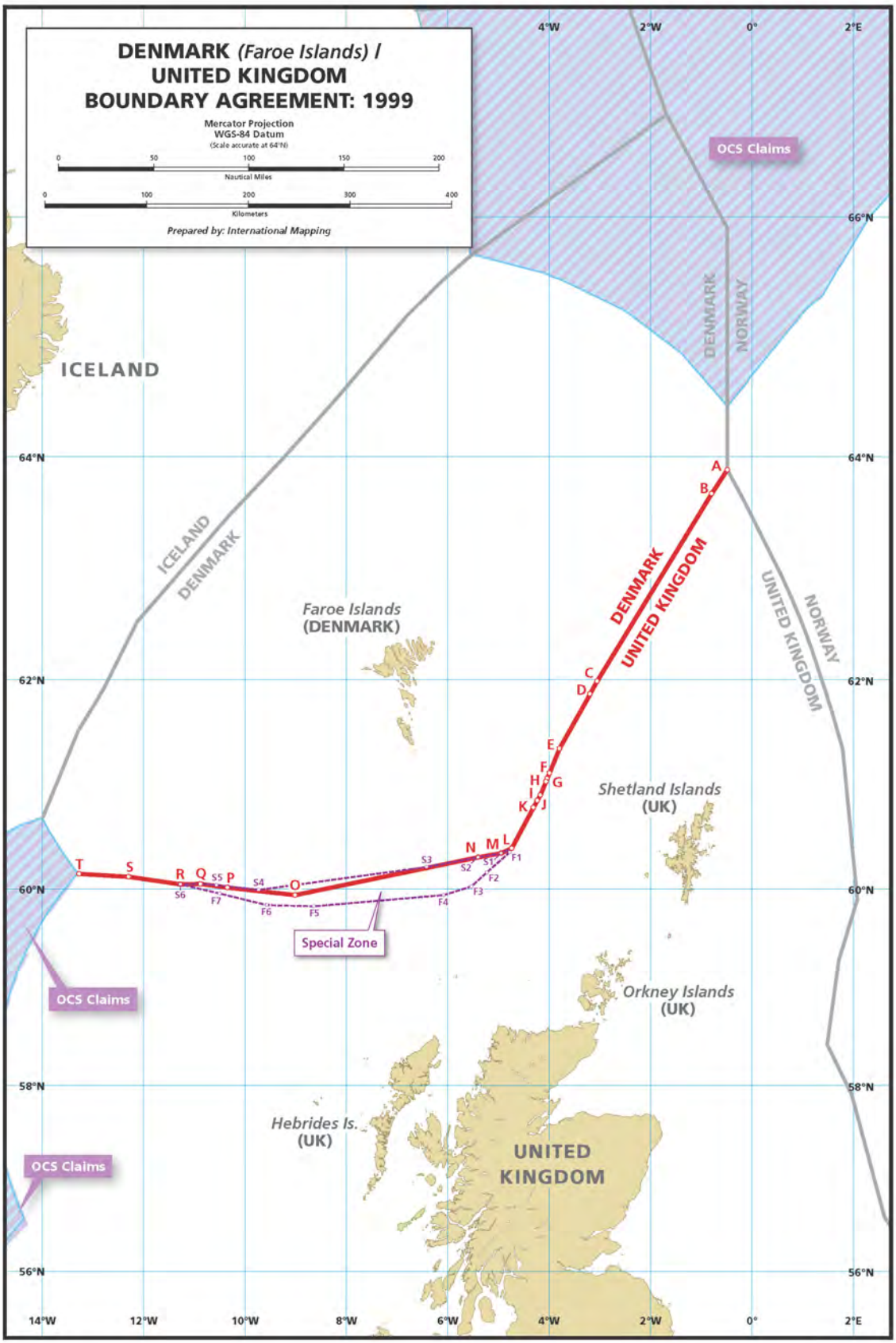

BULGARIA / TURKEY
BOUNDARY AGREEMENT: 1997
Mercator Projection
WGS-84 Datum
(Scale accurate at 44°N)
0 50 100 150
Nautical Miles
0 100 200 300
Kilometers
Prepared by: International Mapping
UKRAINE
Karkinit Bay
Crimean Peninsula
Serpents I.
UKRAINE
ROMANIA
ROMANIA
44°N
Equidistance lines
UKRAINE
TURKEY
BULGARIA
Tri-point with Romania will determine the boundary terminus
Burgas Bay
BULGARIA
TURKEY
T
1
2
3
4
5
6
7
8
9
10
42°N
Igneada Burnu
See inset
TURKEY
Bosporus Strait
Sea of Marmara
TURKEY
40°N
28°E
30°E
32°E
BULGARIA
41°59'N
C
D
E
F
Begendik / Rezovo Bay
TURKEY
41°58'N
28°03'E
28°04'E

Figure 3.2


DENMARK (Faroe Islands) /
UNITED KINGDOM
BOUNDARY AGREEMENT: 1999
Mercator Projection
WGS-84 Datum
(Scale accurate at 64°N)
0 50 100 150 200
Nautical Miles
0 100 200 300 400
Kilometers
Prepared by: International Mapping
OCS Claims
ICELAND
DENMARK
NORWAY
Faroe Islands
(DENMARK)
DENMARK
UNITED KINGDOM
UNITED KINGDOM
NORWAY
Shetland Islands
(UK)
Special Zone
OCS Claims
Orkney Islands
(UK)
Hebrides Is.
(UK)
UNITED
KINGDOM
OCS Claims
A
B
C
D
E
F
G
H
I
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S
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S1
S2
S3
S4
S5
S6
F1
F2
F3
F4
F5
F6
F7
66°N
64°N
62°N
60°N
58°N
56°N
4°W
2°W
0°
2°E
14°W
12°W
10°W
8°W
6°W

Figure 3.3

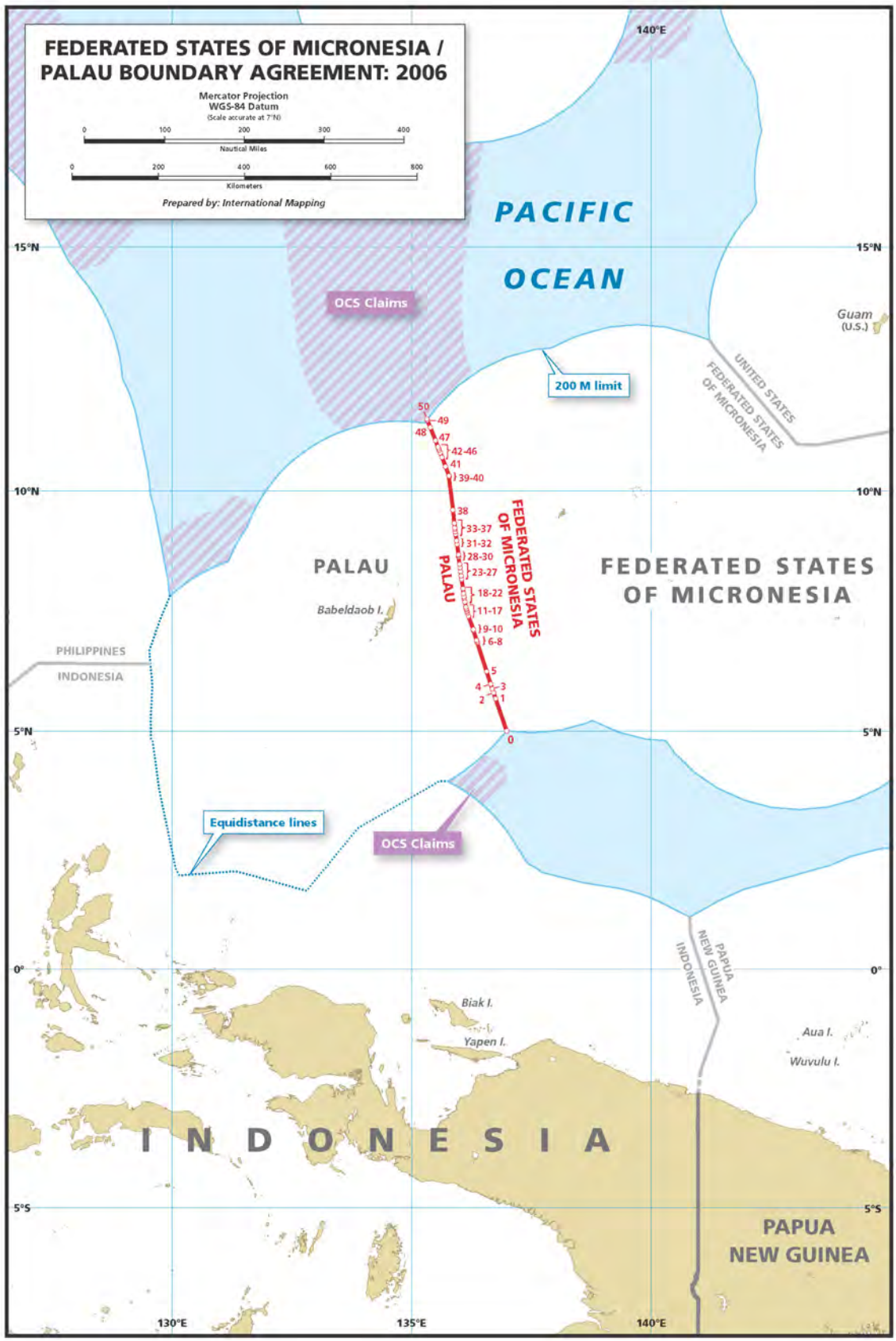

FEDERATED STATES OF MICRONESIA / PALAU BOUNDARY AGREEMENT: 2006
Mercator Projection
WGS-84 Datum
(Scale accurate at 7°N)
0 100 200 300 400
Nautical Miles
0 200 400 600 800
Kilometers
Prepared by: International Mapping
PACIFIC OCEAN
OCS Claims
200 M limit
Guam (U.S.)
UNITED STATES
FEDERATED STATES OF MICRONESIA
50
49
48
47
42-46
41
39-40
38
33-37
31-32
28-30
23-27
18-22
11-17
9-10
6-8
5
4
3
2
1
0
FEDERATED STATES OF MICRONESIA
PALAU
PALAU
Babeldaob I.
FEDERATED STATES OF MICRONESIA
PHILIPPINES
INDONESIA
Equidistance lines
OCS Claims
PAPUA NEW GUINEA
INDONESIA
Biak I.
Yapen I.
Aua I.
Wuvulu I.
I N D O N E S I A
PAPUA NEW GUINEA
140°E
15°N
10°N
5°N
0°
5°S
130°E
135°E
140°E

Figure 3.4

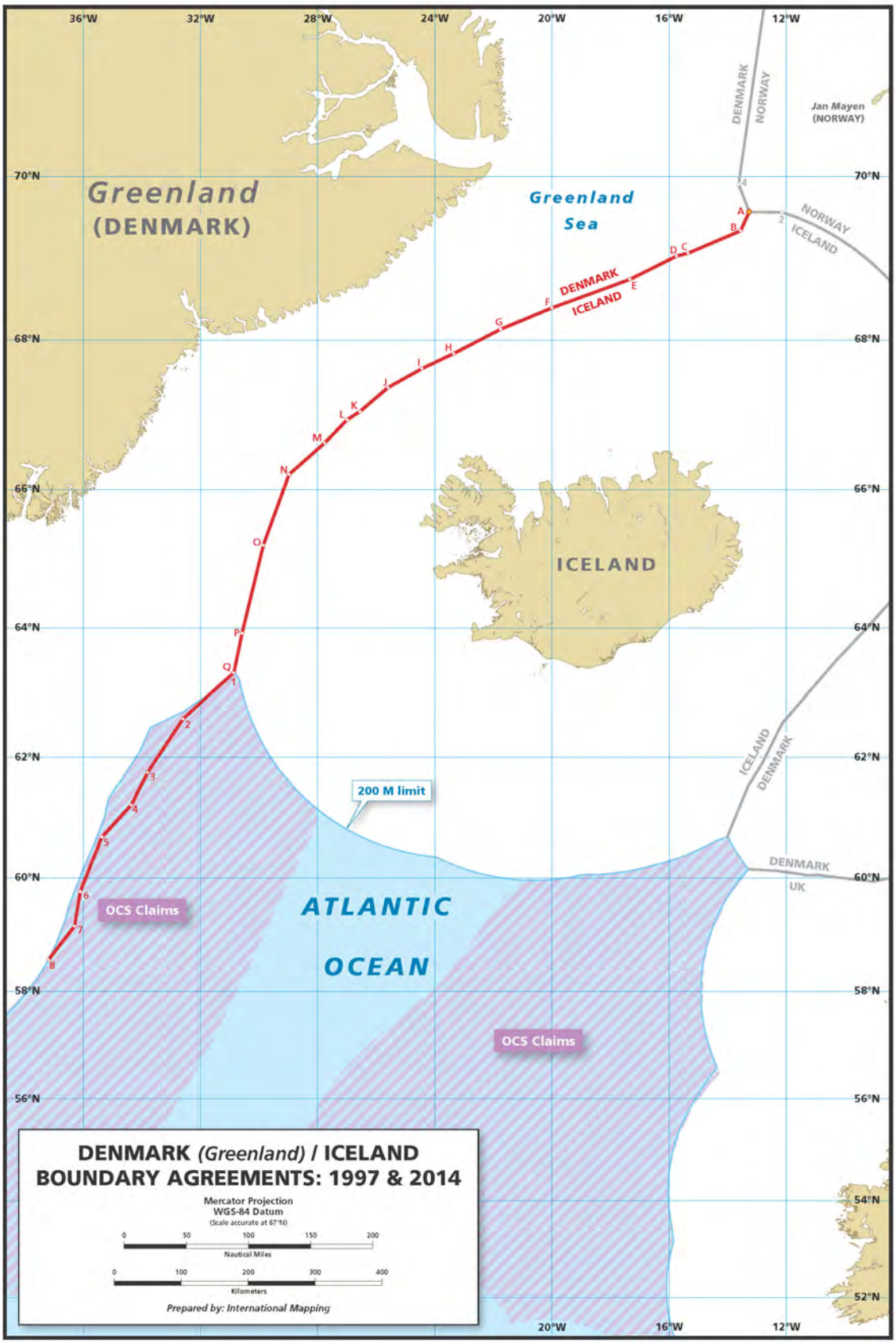

36°W
32°W
28°W
24°W
20°W
16°W
12°W
70°N
68°N
66°N
64°N
62°N
60°N
58°N
56°N
54°N
52°N
Greenland
(DENMARK)
Greenland
Sea
ICELAND
Jan Mayen
(NORWAY)
DENMARK
NORWAY
NORWAY
ICELAND
DENMARK
ICELAND
ICELAND
DENMARK
DENMARK
UK
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
1
2
3
4
5
6
7
8
200 M limit
OCS Claims
OCS Claims
ATLANTIC
OCEAN
DENMARK (Greenland) / ICELAND
BOUNDARY AGREEMENTS: 1997 & 2014
Mercator Projection
WGS-84 Datum
(Scale accurate at 67°N)
0 50 100 150 200
Nautical Miles
0 100 200 300 400
Kilometers
Prepared by: International Mapping

Figure 3.5

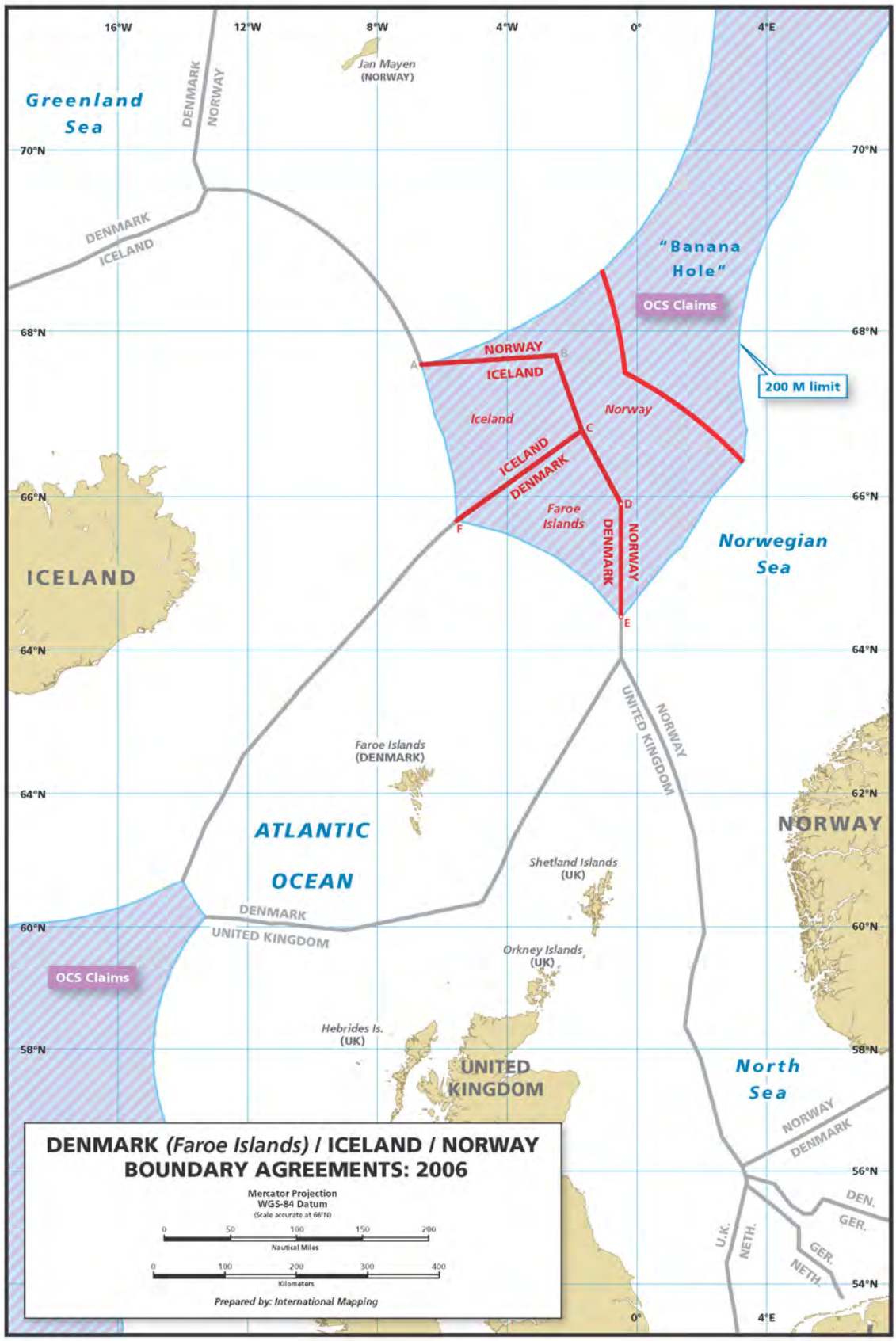

16°W
12°W
8°W
4°W
0°
4°E
70°N
68°N
66°N
64°N
62°N
60°N
58°N
56°N
54°N
Greenland Sea
DENMARK
NORWAY
Jan Mayen (NORWAY)
DENMARK
ICELAND
"Banana Hole"
OCS Claims
200 M limit
NORWAY
ICELAND
Iceland
Norway
ICELAND
DENMARK
Faroe Islands
DENMARK
NORWAY
Norwegian Sea
ICELAND
Faroe Islands (DENMARK)
ATLANTIC OCEAN
DENMARK
UNITED KINGDOM
UNITED KINGDOM
NORWAY
Shetland Islands (UK)
NORWAY
Orkney Islands (UK)
OCS Claims
Hebrides Is. (UK)
UNITED KINGDOM
North Sea
NORWAY
DENMARK
U.K.
NETH.
GER.
DEN.
GER.
NETH.
DENMARK (Faroe Islands) / ICELAND / NORWAY
BOUNDARY AGREEMENTS: 2006
Mercator Projection
WGS-84 Datum
(Scale accurate at 66°N)
0 50 100 150 200
Nautical Miles
0 100 200 300 400
Kilometers
Prepared by: International Mapping

Figure 3.6


150°E
155°E
160°E
165°E
170°E
175°E
180°
175°W
20°S
25°S
30°S
35°S
40°S
45°S
50°S
55°S
60°S
NEW CALEDONIA
FIJI
TONGA
Matthew & Hunter Is.
FRANCE
AUSTRALIA
AUSTRALIA
Norfolk I.
(AUSTRALIA)
OCS Claims
Kermadec Islands
(N.Z.)
Lord Howe I.
(AUSTRALIA)
AUSTRALIA
NEW ZEALAND
North Island
NEW ZEALAND
South Island
Tasmania
Chatham Is.
(N.Z.)
Bounty Is.
(N.Z.)
Antipodes I.
(N.Z.)
OCS Claims
Auckland I.
(N.Z.)
NEW ZEALAND
AUSTRALIA
Campbell I.
(N.Z.)
Macquarie I.
(AUSTRALIA)
SOUTH
PACIFIC
OCEAN
OCS Claims
AUSTRALIA / NEW ZEALAND
BOUNDARIES AND OCS CLAIMS
Mercator Projection
WGS-84 Datum
(Scale accurate at 45°S)
0
200
400
600
Nautical Miles
0
400
800
1,200
Kilometers
Prepared by: International Mapping

Figure 3.7

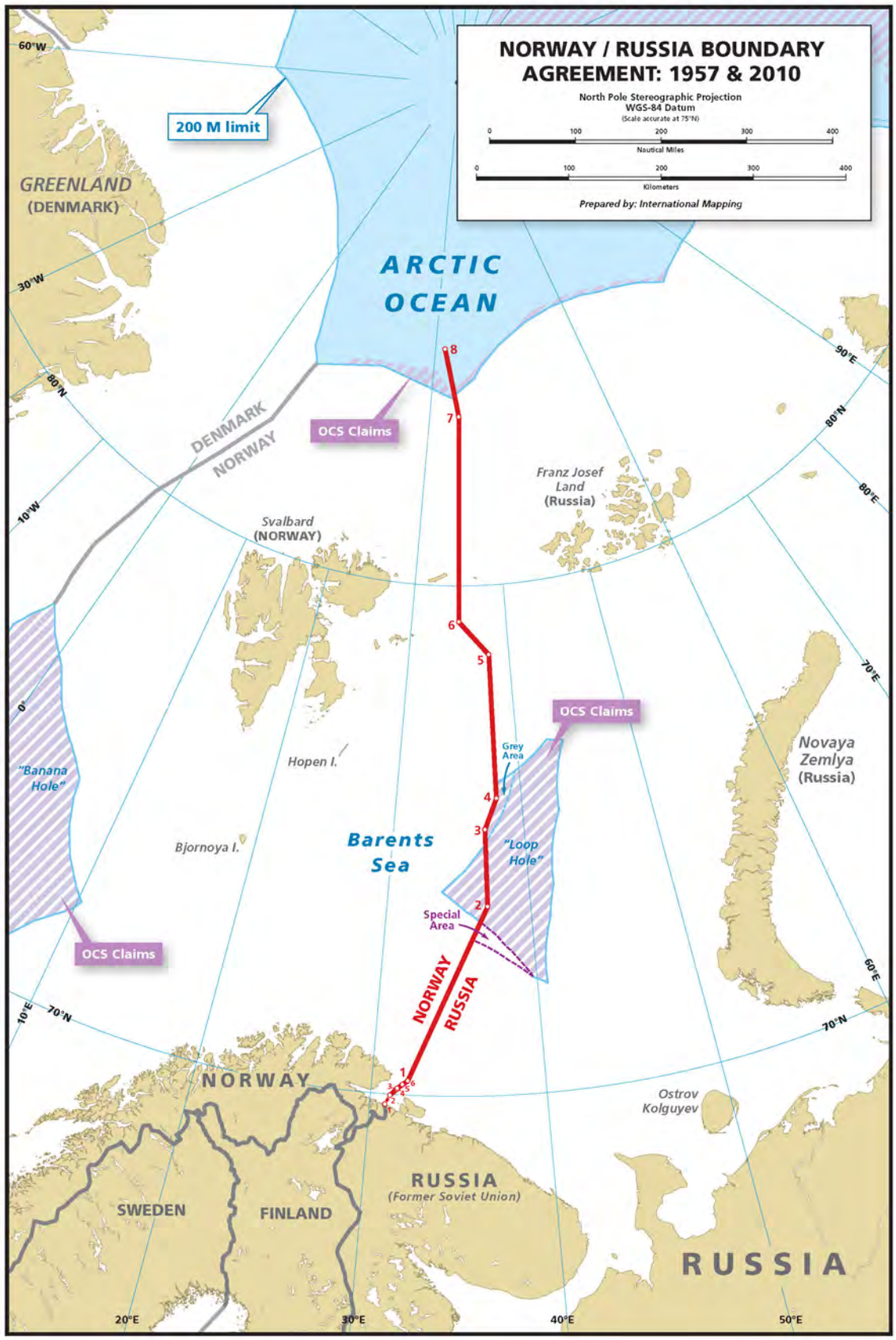

NORWAY / RUSSIA BOUNDARY AGREEMENT: 1957 & 2010
North Pole Stereographic Projection
WGS-84 Datum
(Scale accurate at 75°N)
0 100 200 300 400
Nautical Miles
0 100 200 300 400
Kilometers
Prepared by: International Mapping
200 M limit
GREENLAND (DENMARK)
ARCTIC OCEAN
OCS Claims
DENMARK
NORWAY
Svalbard (NORWAY)
Franz Josef Land (Russia)
Hopen I.
Bjornoya I.
Barents Sea
"Banana Hole"
"Loop Hole"
Grey Area
Special Area
Novaya Zemlya (Russia)
NORWAY
RUSSIA
SWEDEN
FINLAND
RUSSIA (Former Soviet Union)
Ostrov Kolguyev
RUSSIA
60°W
30°W
0°
10°W
10°E
20°E
30°E
40°E
50°E
60°E
70°E
80°E
90°E
80°N
70°N

Figure 3.8

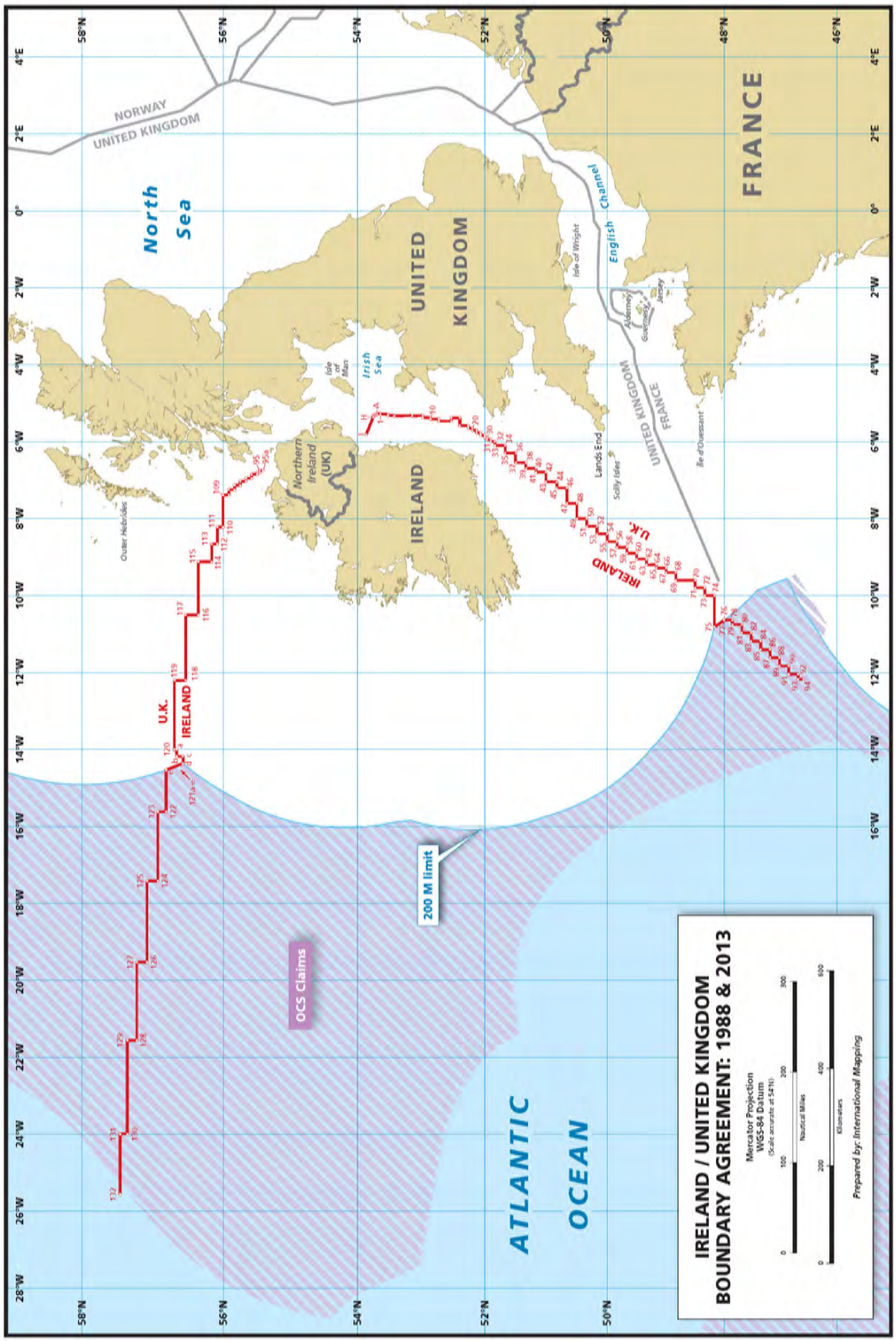

NORWAY
UNITED KINGDOM
North Sea
UNITED KINGDOM
FRANCE
English Channel
Isle of Wight
Alderney
Guernsey
Jersey
Irish Sea
Isle of Man
Northern Ireland (UK)
IRELAND
Outer Hebrides
Lands End
Scilly Isles
Ile d'Ouessant
U.K.
IRELAND
U.K.
IRELAND
200 M limit
OCS Claims
ATLANTIC
OCEAN
IRELAND / UNITED KINGDOM
BOUNDARY AGREEMENT: 1988 & 2013
Mercator Projection
WGS-84 Datum
(Scale accurate at 54°N)
Nautical Miles
Kilometers
Prepared by: International Mapping

Figure 3.9

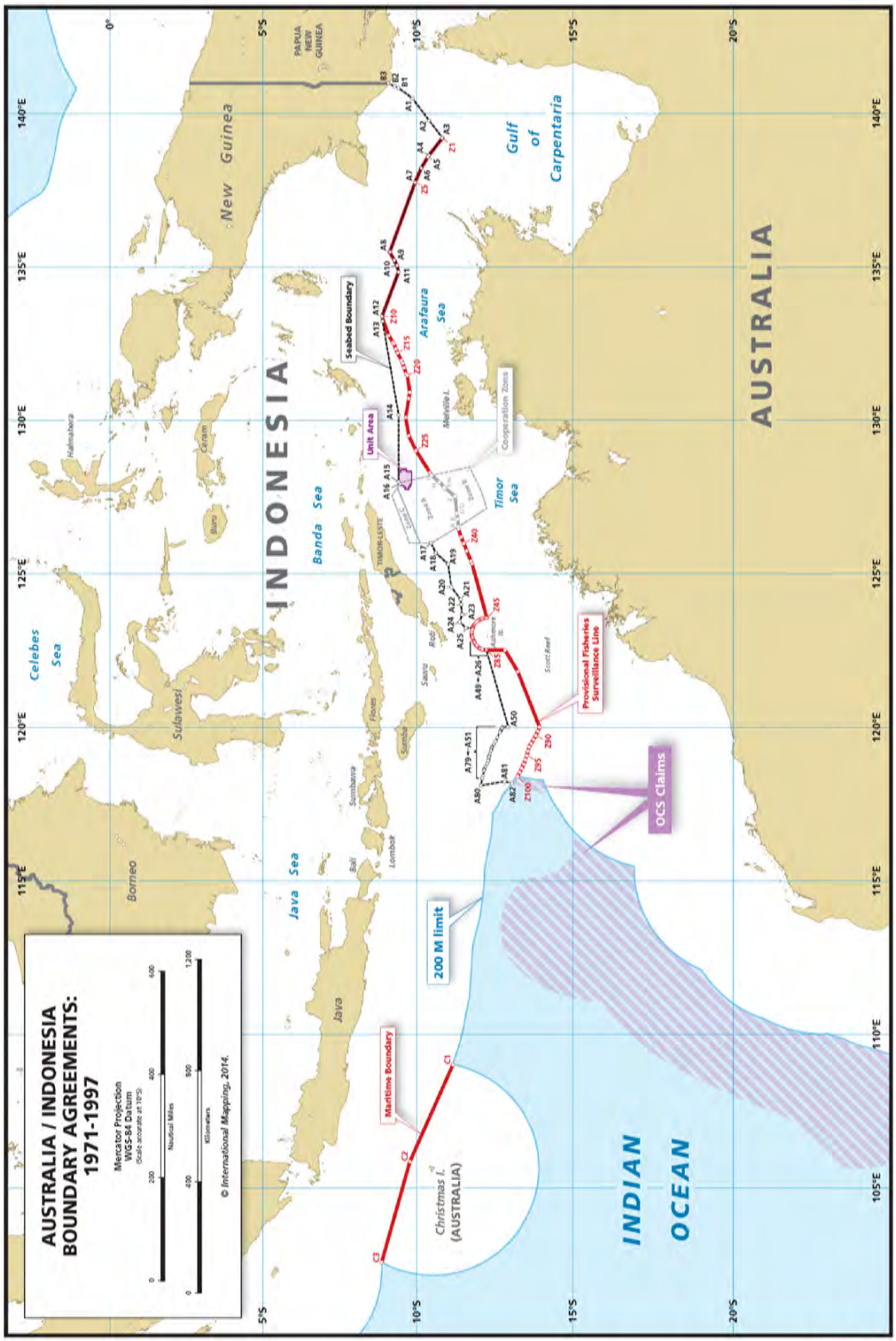

AUSTRALIA / INDONESIA
BOUNDARY AGREEMENTS:
1971-1997
Mercator Projection
WGS-84 Datum
(Scale accurate at 10°S)
Nautical Miles
Kilometers
© International Mapping, 2014.
INDONESIA
AUSTRALIA
Papua New Guinea
New Guinea
Celebes Sea
Sulawesi
Borneo
Java Sea
Java
Bali
Lombok
Sumbawa
Flores
Sumba
Timor Sea
Arafaura Sea
Banda Sea
Gulf of Carpentaria
Timor-Leste
Seabed Boundary
Unit Area
Maritime Boundary
200 M limit
OCS Claims
Provisional Fisheries Surveillance Line
Christmas I. (AUSTRALIA)
INDIAN OCEAN

Figure 3.10

Figure 3 11

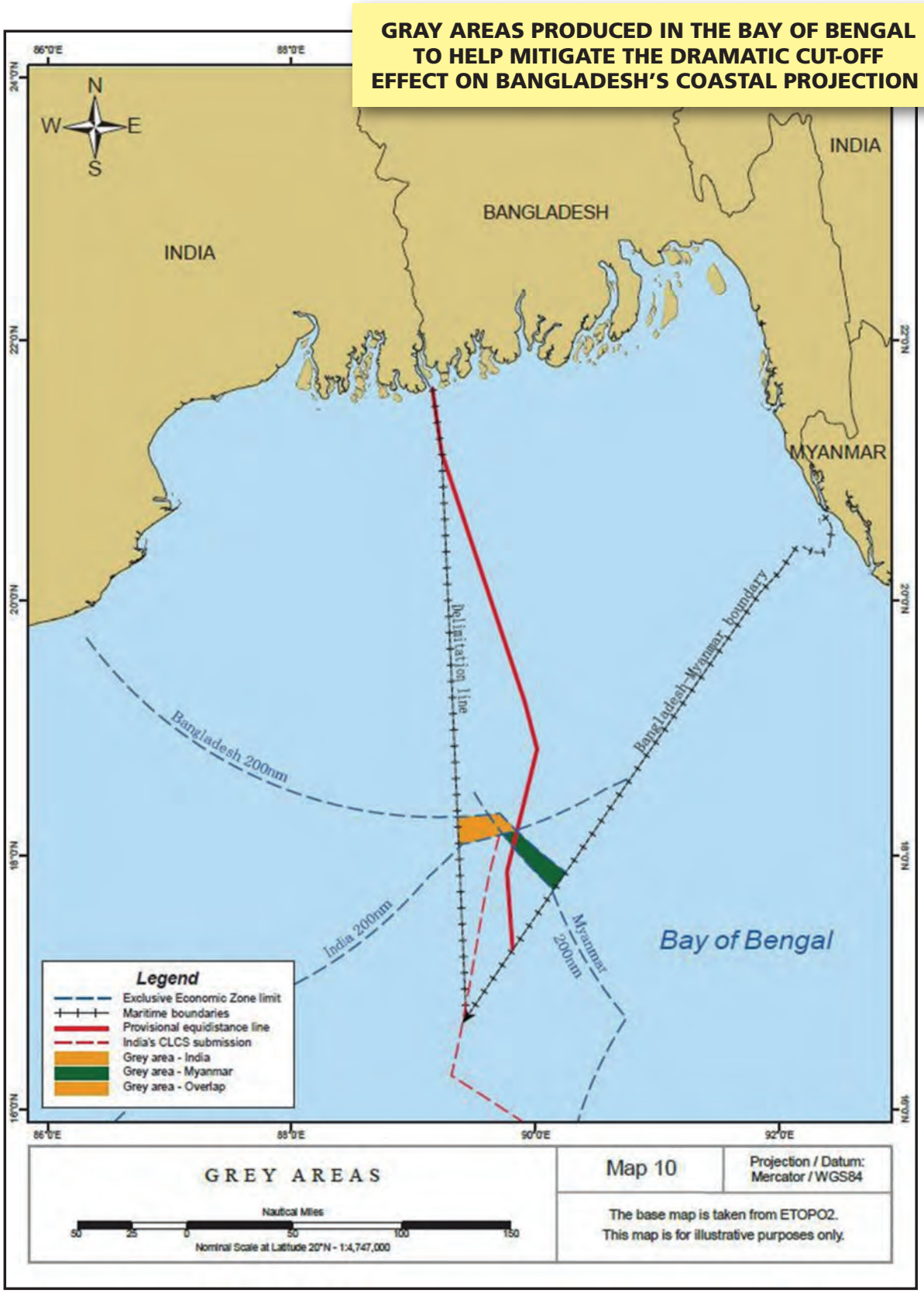


Figure 3.11

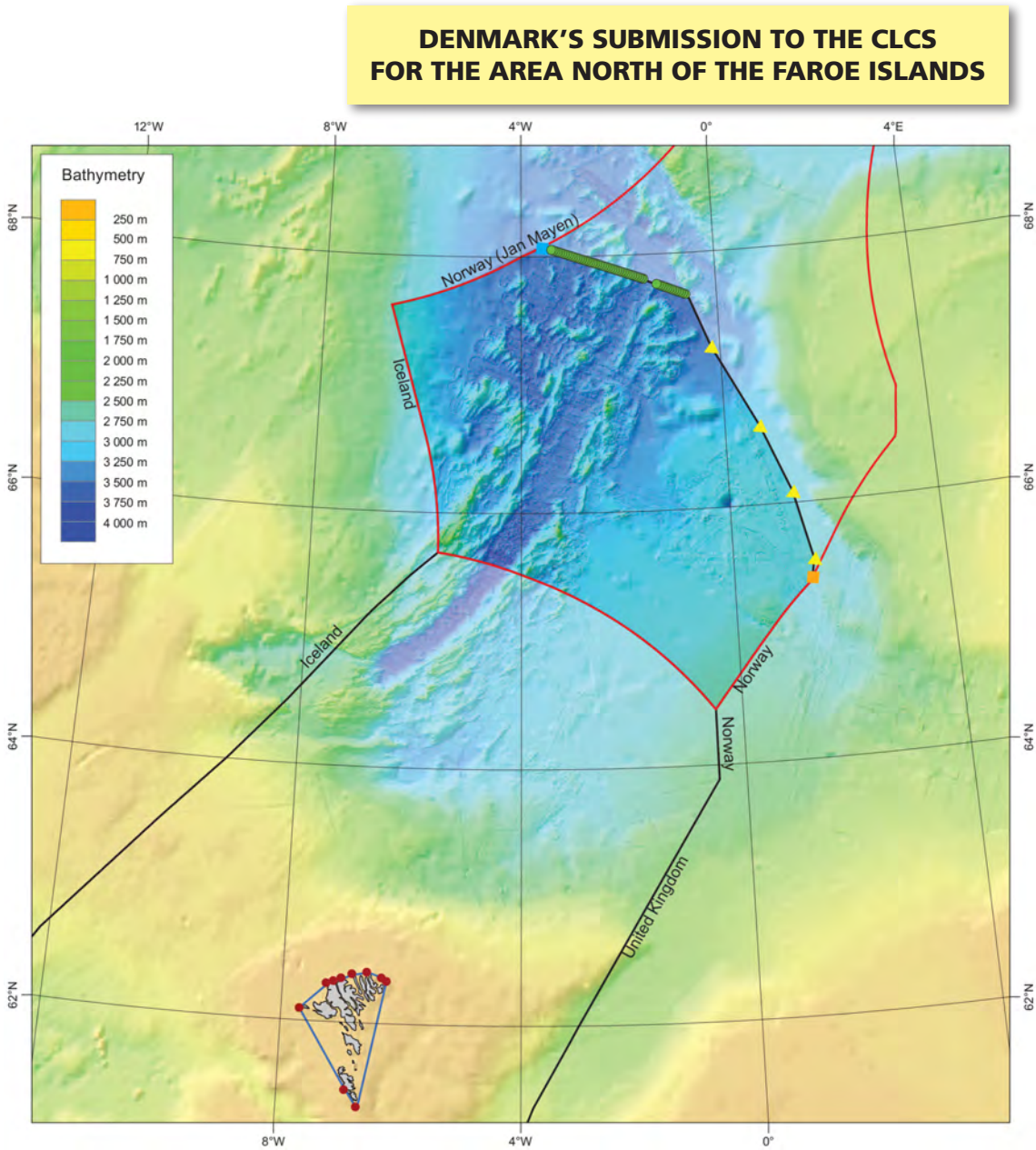

DENMARK'S SUBMISSION TO THE CLCS
FOR THE AREA NORTH OF THE FAROE ISLANDS
Bathymetry
250 m
500 m
750 m
1 000 m
1 250 m
1 500 m
1 750 m
2 000 m
2 250 m
2 500 m
2 750 m
3 000 m
3 250 m
3 500 m
3 750 m
4 000 m
12°W
8°W
4°W
0°
4°E
68°N
66°N
64°N
62°N
Norway (Jan Mayen)
Iceland
Iceland
Norway
Norway
United Kingdom

Figure 3.12

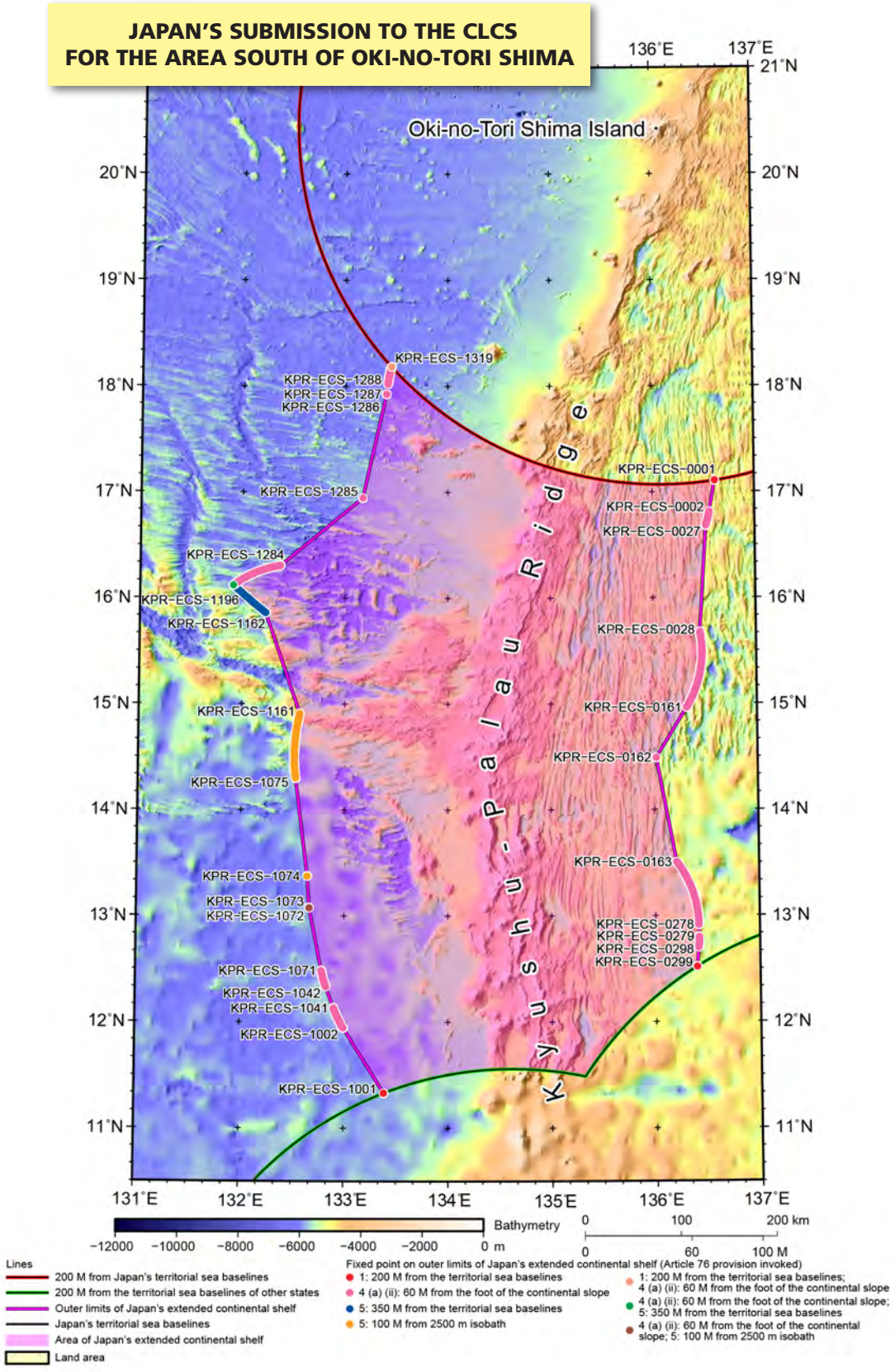

JAPAN'S SUBMISSION TO THE CLCS
FOR THE AREA SOUTH OF OKI-NO-TORI SHIMA
Oki-no-Tori Shima Island
KPR-ECS-1319
KPR-ECS-1288
KPR-ECS-1287
KPR-ECS-1286
KPR-ECS-1285
KPR-ECS-1284
KPR-ECS-1196
KPR-ECS-1162
KPR-ECS-1161
KPR-ECS-1075
KPR-ECS-1074
KPR-ECS-1073
KPR-ECS-1072
KPR-ECS-1071
KPR-ECS-1042
KPR-ECS-1041
KPR-ECS-1002
KPR-ECS-1001
KPR-ECS-0001
KPR-ECS-0002
KPR-ECS-0027
KPR-ECS-0028
KPR-ECS-0161
KPR-ECS-0162
KPR-ECS-0163
KPR-ECS-0278
KPR-ECS-0279
KPR-ECS-0298
KPR-ECS-0299
Kyushu-Palau Ridge
136°E
137°E
21°N
20°N
19°N
18°N
17°N
16°N
15°N
14°N
13°N
12°N
11°N
131°E
132°E
133°E
134°E
135°E
Bathymetry
−12000 −10000 −8000 −6000 −4000 −2000 0 m
0 100 200 km
0 60 100 M
Lines
200 M from Japan's territorial sea baselines
200 M from the territorial sea baselines of other states
Outer limits of Japan's extended continental shelf
Japan's territorial sea baselines
Area of Japan's extended continental shelf
Land area
Fixed point on outer limits of Japan's extended continental shelf (Article 76 provision invoked)
1: 200 M from the territorial sea baselines
4 (a) (ii): 60 M from the foot of the continental slope
5: 350 M from the territorial sea baselines
5: 100 M from 2500 m isobath
1: 200 M from the territorial sea baselines; 4 (a) (ii): 60 M from the foot of the continental slope
4 (a) (ii): 60 M from the foot of the continental slope; 5: 350 M from the territorial sea baselines
4 (a) (ii): 60 M from the foot of the continental slope; 5: 100 M from 2500 m isobath

Figure 3.13a

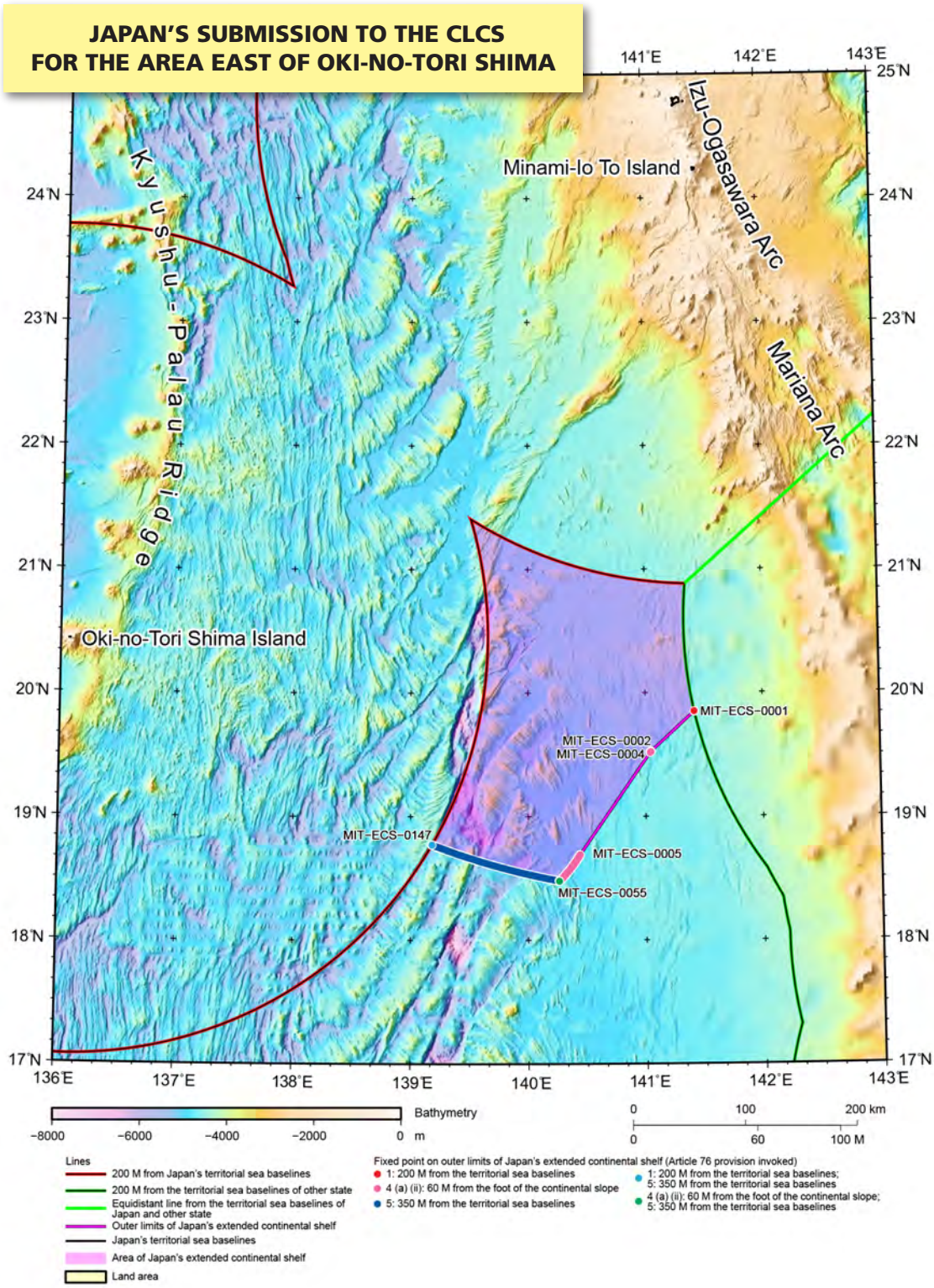

JAPAN'S SUBMISSION TO THE CLCS
FOR THE AREA EAST OF OKI-NO-TORI SHIMA
Kyushu-Palau Ridge
Izu-Ogasawara Arc
Mariana Arc
Minami-Io To Island
Oki-no-Tori Shima Island
MIT-ECS-0001
MIT-ECS-0002
MIT-ECS-0004
MIT-ECS-0005
MIT-ECS-0055
MIT-ECS-0147
141°E
142°E
143°E
25°N
24°N
23°N
22°N
21°N
20°N
19°N
18°N
17°N
136°E
137°E
138°E
139°E
140°E
Bathymetry
−8000
−6000
−4000
−2000
0 m
0
100
200 km
0
60
100 M
Lines
200 M from Japan's territorial sea baselines
200 M from the territorial sea baselines of other state
Equidistant line from the territorial sea baselines of Japan and other state
Outer limits of Japan's extended continental shelf
Japan's territorial sea baselines
Area of Japan's extended continental shelf
Land area
Fixed point on outer limits of Japan's extended continental shelf (Article 76 provision invoked)
1: 200 M from the territorial sea baselines
4 (a) (ii): 60 M from the foot of the continental slope
5: 350 M from the territorial sea baselines
1: 200 M from the territorial sea baselines; 5: 350 M from the territorial sea baselines
4 (a) (ii): 60 M from the foot of the continental slope; 5: 350 M from the territorial sea baselines

Figure 3.13b

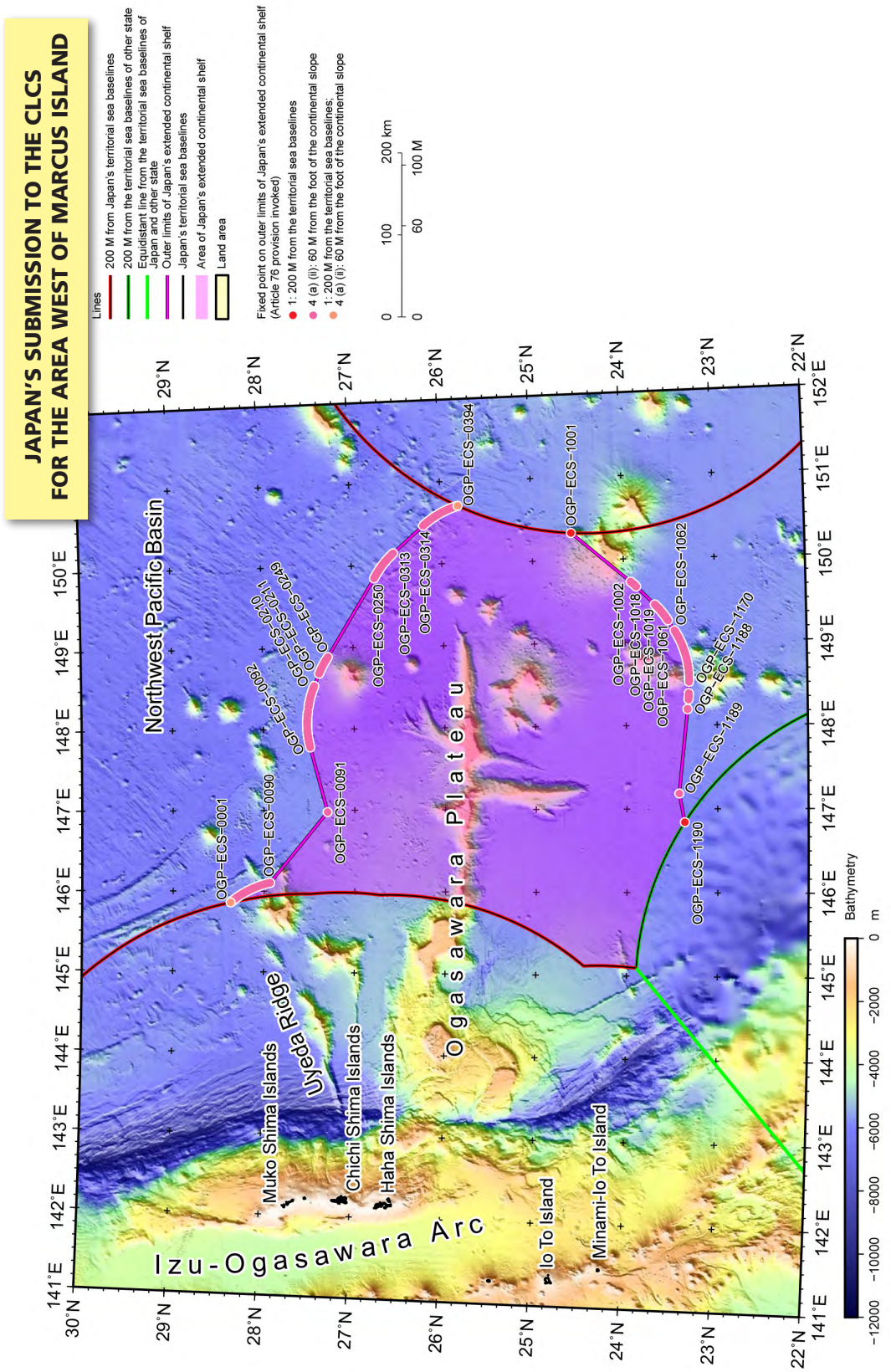

JAPAN'S SUBMISSION TO THE CLCS
FOR THE AREA WEST OF MARCUS ISLAND
Lines
200 M from Japan's territorial sea baselines
200 M from the territorial sea baselines of other state
Equidistant line from the territorial sea baselines of Japan and other state
Outer limits of Japan's extended continental shelf
Japan's territorial sea baselines
Area of Japan's extended continental shelf
Land area
Fixed point on outer limits of Japan's extended continental shelf (Article 76 provision invoked)
1: 200 M from the territorial sea baselines
4 (a) (ii): 60 M from the foot of the continental slope
1: 200 M from the territorial sea baselines;
4 (a) (ii): 60 M from the foot of the continental slope
0 100 200 km
0 60 100 M
Northwest Pacific Basin
Izu-Ogasawara Arc
Uyeda Ridge
Ogasawara Plateau
Muko Shima Islands
Chichi Shima Islands
Haha Shima Islands
Io To Island
Minami-Io To Island
OGP-ECS-0001
OGP-ECS-0090
OGP-ECS-0092
OGP-ECS-0210-1
OGP-ECS-0210-2
OGP-ECS-0091
OGP-ECS-0250
OGP-ECS-0313
OGP-ECS-0314
OGP-ECS-0394
OGP-ECS-1001
OGP-ECS-1002
OGP-ECS-1018
OGP-ECS-1019
OGP-ECS-1061
OGP-ECS-1062
OGP-ECS-1170
OGP-ECS-1188
OGP-ECS-1189
OGP-ECS-1190
Bathymetry
0 m
−2000
−4000
−6000
−8000
−10000
−12000

Figure 3.13c

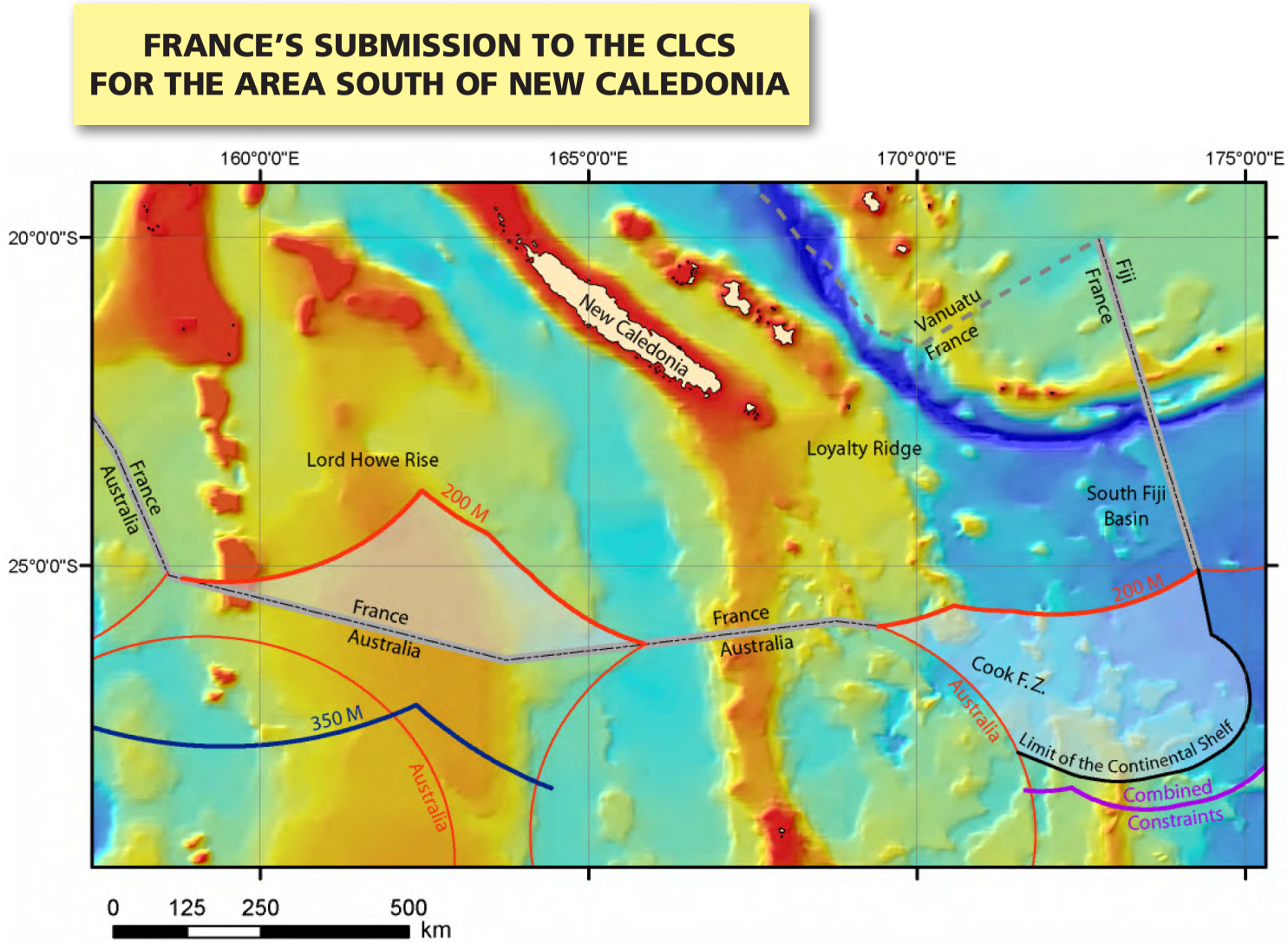


Figure 3.14

Figure 3 14

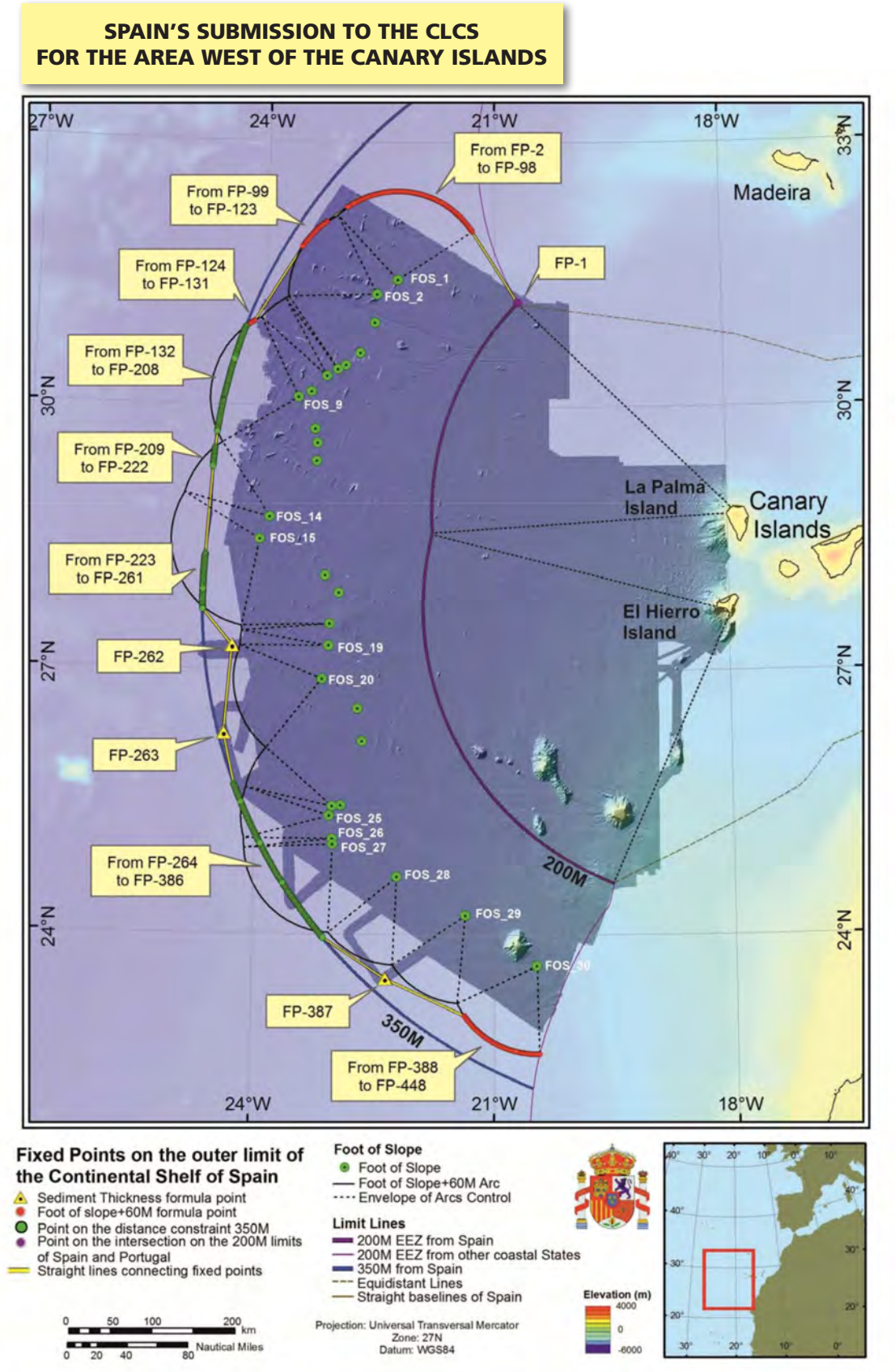

SPAIN'S SUBMISSION TO THE CLCS
FOR THE AREA WEST OF THE CANARY ISLANDS
27°W
24°W
21°W
18°W
33°N
30°N
27°N
24°N
From FP-2
to FP-98
From FP-99
to FP-123
From FP-124
to FP-131
From FP-132
to FP-208
From FP-209
to FP-222
From FP-223
to FP-261
FP-262
FP-263
From FP-264
to FP-386
FP-387
From FP-388
to FP-448
FP-1
Madeira
La Palma
Island
Canary
Islands
El Hierro
Island
FOS_1
FOS_2
FOS_9
FOS_14
FOS_15
FOS_19
FOS_20
FOS_25
FOS_26
FOS_27
FOS_28
FOS_29
FOS_30
200M
350M
Fixed Points on the outer limit of the Continental Shelf of Spain
Sediment Thickness formula point
Foot of slope+60M formula point
Point on the distance constraint 350M
Point on the intersection on the 200M limits of Spain and Portugal
Straight lines connecting fixed points
Foot of Slope
Foot of Slope
Foot of Slope+60M Arc
Envelope of Arcs Control
Limit Lines
200M EEZ from Spain
200M EEZ from other coastal States
350M from Spain
Equidistant Lines
Straight baselines of Spain
Elevation (m)
4000
0
-6000
0 50 100 200 km
0 20 40 80 Nautical Miles
Projection: Universal Transversal Mercator
Zone: 27N
Datum: WGS84

Figure 3.15

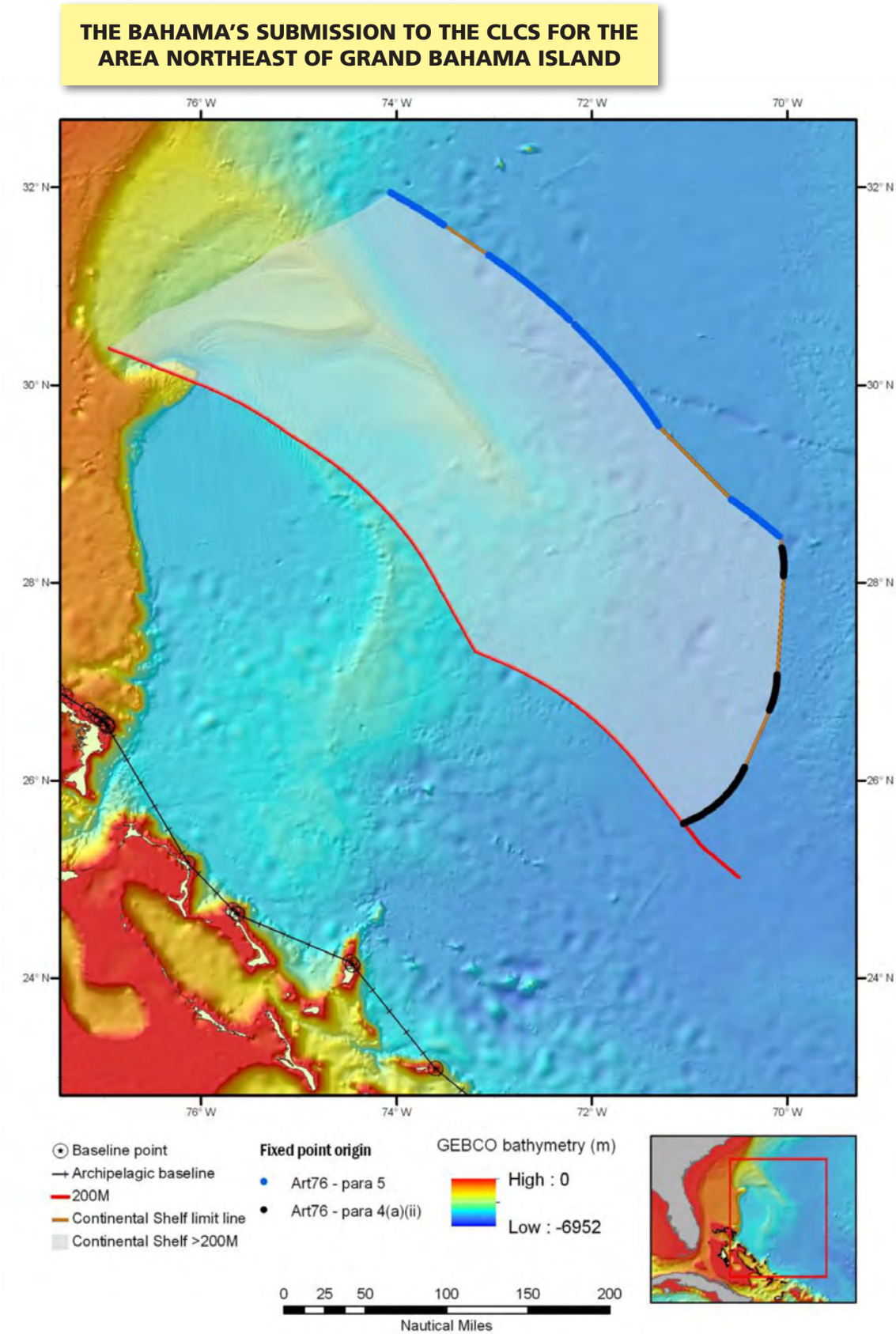

THE BAHAMA'S SUBMISSION TO THE CLCS FOR THE AREA NORTHEAST OF GRAND BAHAMA ISLAND
76° W
74° W
72° W
70° W
32° N
30° N
28° N
26° N
24° N
Baseline point
Archipelagic baseline
200M
Continental Shelf limit line
Continental Shelf >200M
Fixed point origin
Art76 - para 5
Art76 - para 4(a)(ii)
GEBCO bathymetry (m)
High : 0
Low : -6952
0 25 50 100 150 200
Nautical Miles

Figure 3.16

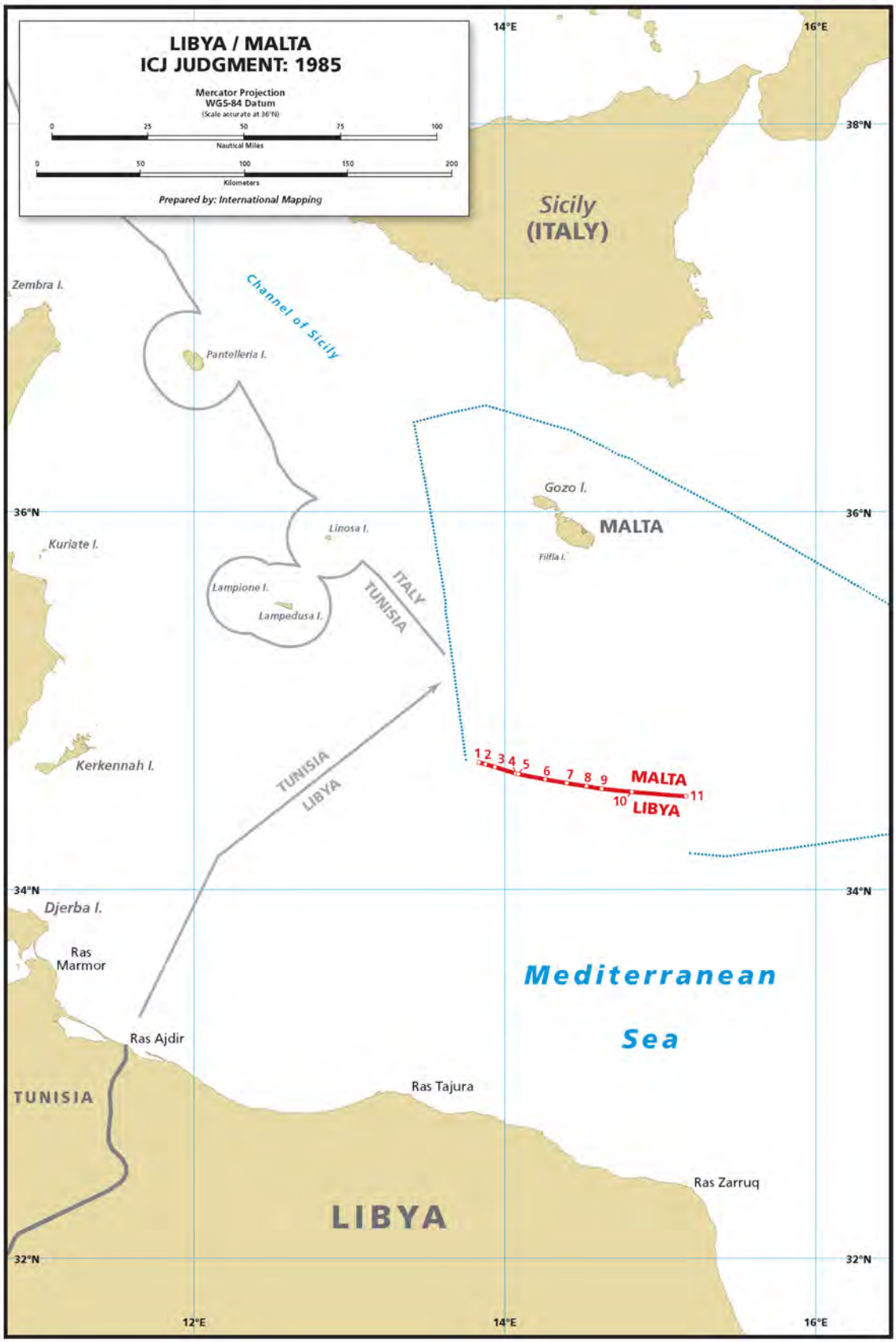
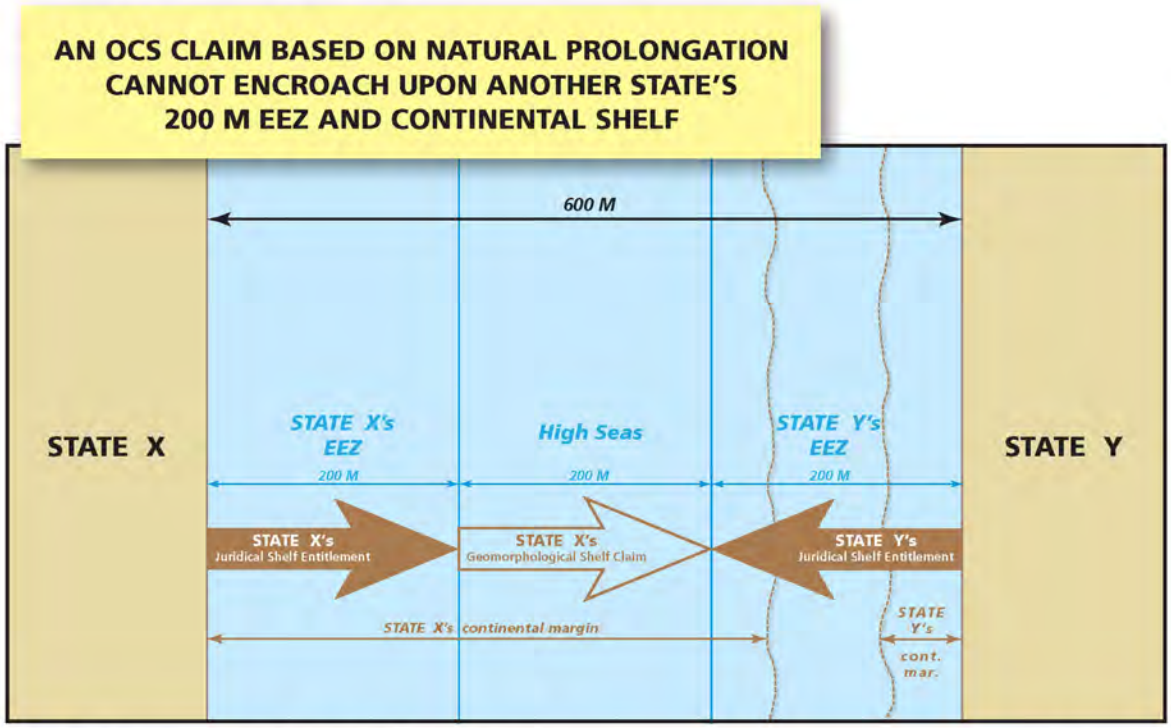

LIBYA / MALTA
ICJ JUDGMENT: 1985
Mercator Projection
WGS-84 Datum
(Scale accurate at 36°N)
0 25 50 75 100
Nautical Miles
0 50 100 150 200
Kilometers
Prepared by: International Mapping
14°E
16°E
38°N
Sicily
(ITALY)
Zembra I.
Channel of Sicily
Pantelleria I.
Gozo I.
MALTA
36°N
Linosa I.
Kuriate I.
Filfla I.
Lampione I.
Lampedusa I.
ITALY
TUNISIA
1 2 3 4 5 6 7 8 9 MALTA
10 LIBYA 11
Kerkennah I.
TUNISIA
LIBYA
34°N
Djerba I.
Ras
Marmor
Mediterranean
Sea
Ras Ajdir
TUNISIA
Ras Tajura
Ras Zarruq
LIBYA
32°N
12°E
14°E
16°E

Figure 3.17



Source: *The Commission on the Limits of the Continental Shelf,* Oystein Jensen, 2014.

Figure 3.18

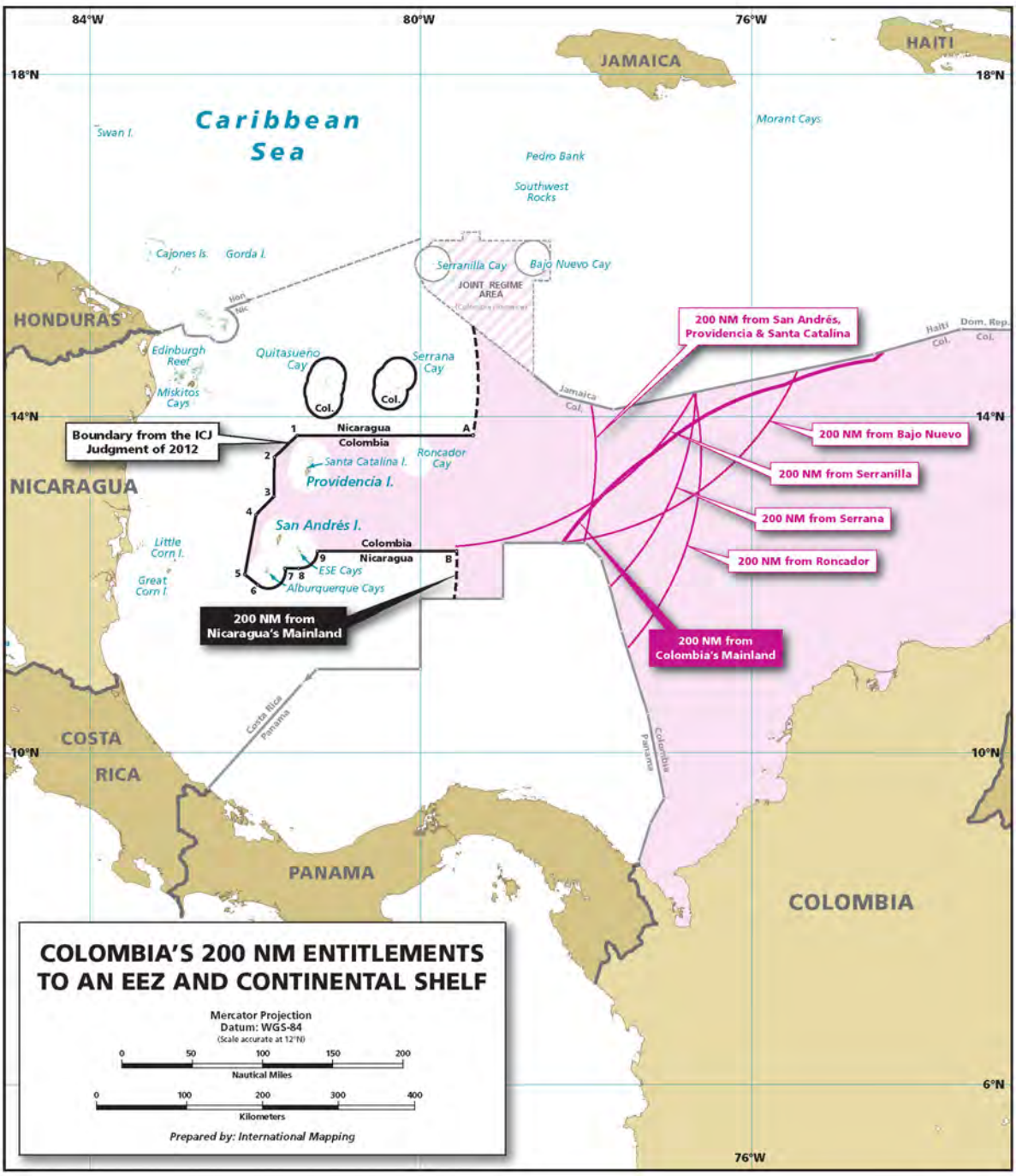

84°W
80°W
76°W
18°N
14°N
10°N
6°N
JAMAICA
HAITI
Caribbean Sea
Swan I.
Morant Cays
Pedro Bank
Southwest Rocks
Cajones Is.
Gorda I.
Serranilla Cay
Bajo Nuevo Cay
JOINT REGIME AREA
HONDURAS
Edinburgh Reef
Quitasueño Cay
Serrana Cay
Miskitos Cays
Col.
Haiti
Dom. Rep.
Jamaica
200 NM from San Andrés, Providencia & Santa Catalina
Boundary from the ICJ Judgment of 2012
Nicaragua
Colombia
Santa Catalina I.
Roncador Cay
Providencia I.
NICARAGUA
San Andrés I.
Little Corn I.
Great Corn I.
ESE Cays
Alburquerque Cays
200 NM from Bajo Nuevo
200 NM from Serranilla
200 NM from Serrana
200 NM from Roncador
200 NM from Nicaragua's Mainland
200 NM from Colombia's Mainland
Costa Rica
Panama
COSTA RICA
PANAMA
COLOMBIA
COLOMBIA'S 200 NM ENTITLEMENTS TO AN EEZ AND CONTINENTAL SHELF
Mercator Projection
Datum: WGS-84
(Scale accurate at 12°N)
Nautical Miles
Kilometers
Prepared by: International Mapping

Figure 4.1

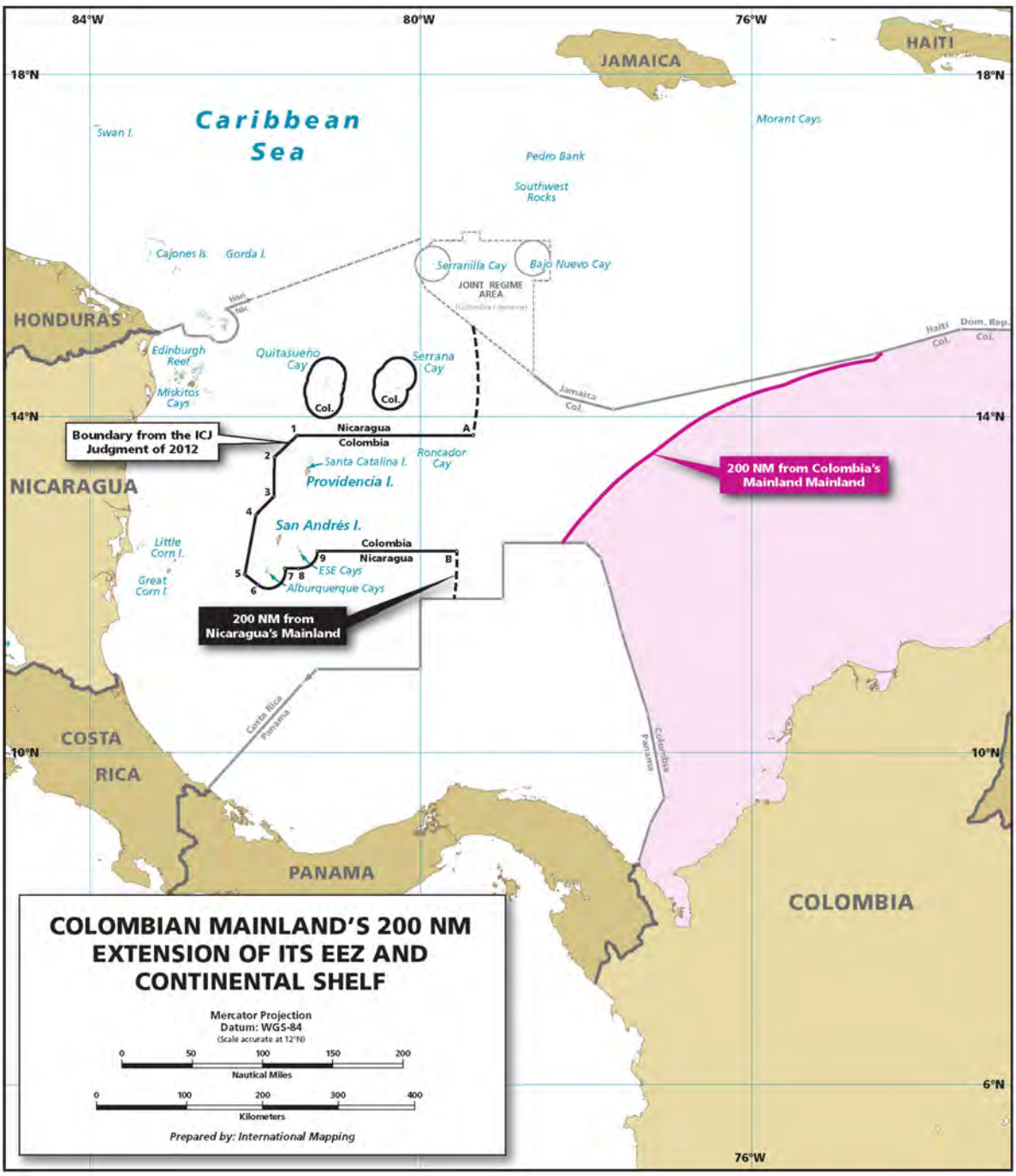

84°W
80°W
76°W
18°N
14°N
10°N
6°N
JAMAICA
HAITI
Caribbean Sea
Swan I.
Morant Cays
Pedro Bank
Southwest Rocks
Cajones Is.
Gorda I.
Serranilla Cay
Bajo Nuevo Cay
JOINT REGIME AREA
HONDURAS
Edinburgh Reef
Quitasueño Cay
Serrana Cay
Miskitos Cays
Col.
Haiti
Dom. Rep.
Jamaica
Boundary from the ICJ Judgment of 2012
Nicaragua
Colombia
Roncador Cay
Santa Catalina I.
Providencia I.
NICARAGUA
San Andrés I.
Little Corn I.
Great Corn I.
ESE Cays
Alburquerque Cays
200 NM from Nicaragua's Mainland
200 NM from Colombia's Mainland Mainland
Costa Rica
Panama
COSTA RICA
PANAMA
COLOMBIA
COLOMBIAN MAINLAND'S 200 NM EXTENSION OF ITS EEZ AND CONTINENTAL SHELF
Mercator Projection
Datum: WGS-84
(Scale accurate at 12°N)
Nautical Miles
Kilometers
Prepared by: International Mapping

Figure 4.2

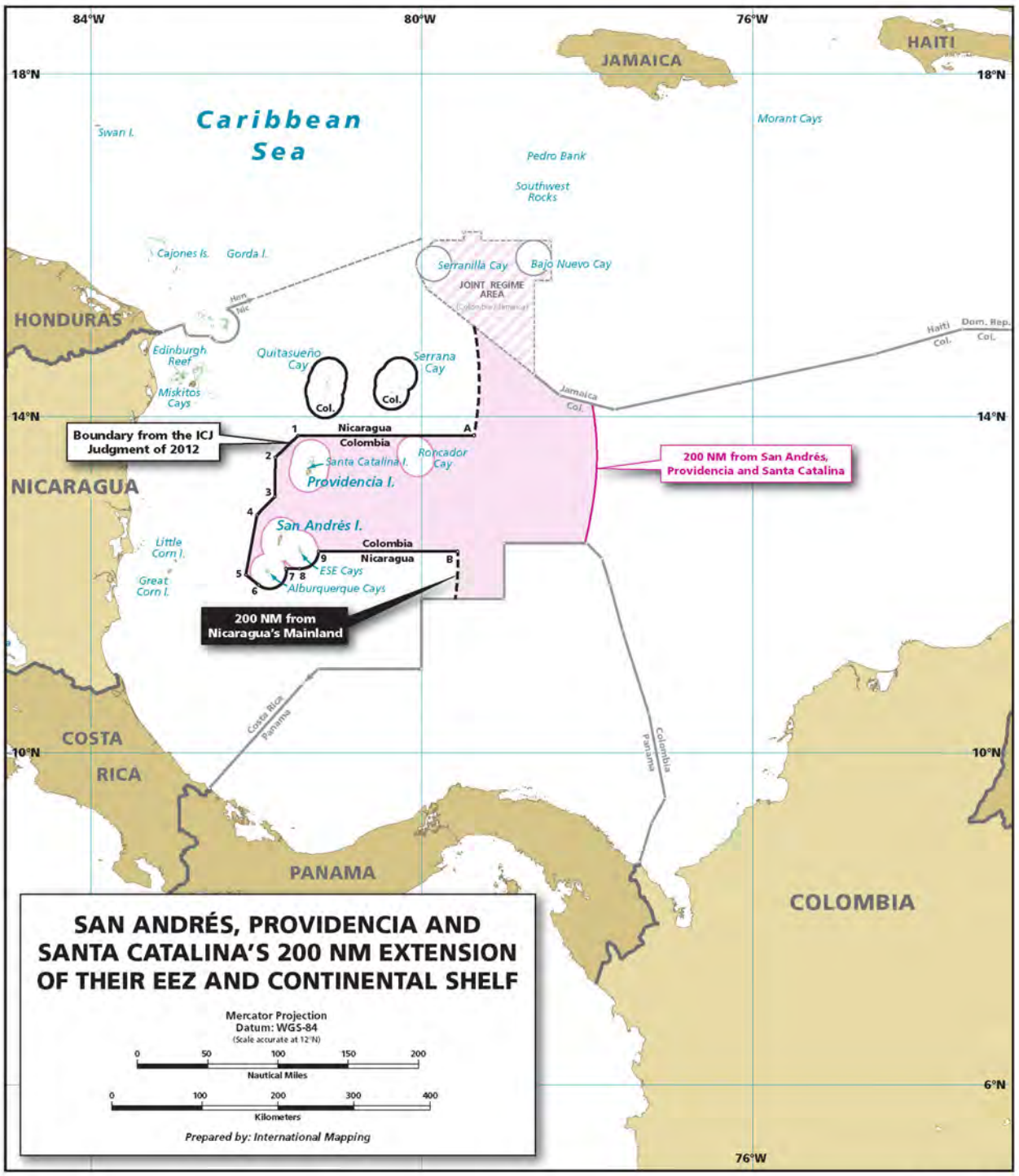

84°W
80°W
76°W
18°N
14°N
10°N
6°N
JAMAICA
HAITI
Caribbean Sea
Swan I.
Morant Cays
Pedro Bank
Southwest Rocks
Cajones Is.
Gorda I.
Serranilla Cay
Bajo Nuevo Cay
JOINT REGIME AREA
HONDURAS
Edinburgh Reef
Quitasueño Cay
Serrana Cay
Miskitos Cays
Col.
Haiti
Dom. Rep.
Jamaica
Boundary from the ICJ Judgment of 2012
Nicaragua
Colombia
Santa Catalina I.
Roncador Cay
Providencia I.
200 NM from San Andrés, Providencia and Santa Catalina
NICARAGUA
San Andrés I.
Little Corn I.
Great Corn I.
ESE Cays
Alburquerque Cays
200 NM from Nicaragua's Mainland
Costa Rica
Panama
COSTA RICA
PANAMA
COLOMBIA
SAN ANDRÉS, PROVIDENCIA AND SANTA CATALINA'S 200 NM EXTENSION OF THEIR EEZ AND CONTINENTAL SHELF
Mercator Projection
Datum: WGS-84
(Scale accurate at 12°N)
0 50 100 150 200
Nautical Miles
0 100 200 300 400
Kilometers
Prepared by: International Mapping

Figure 4.3

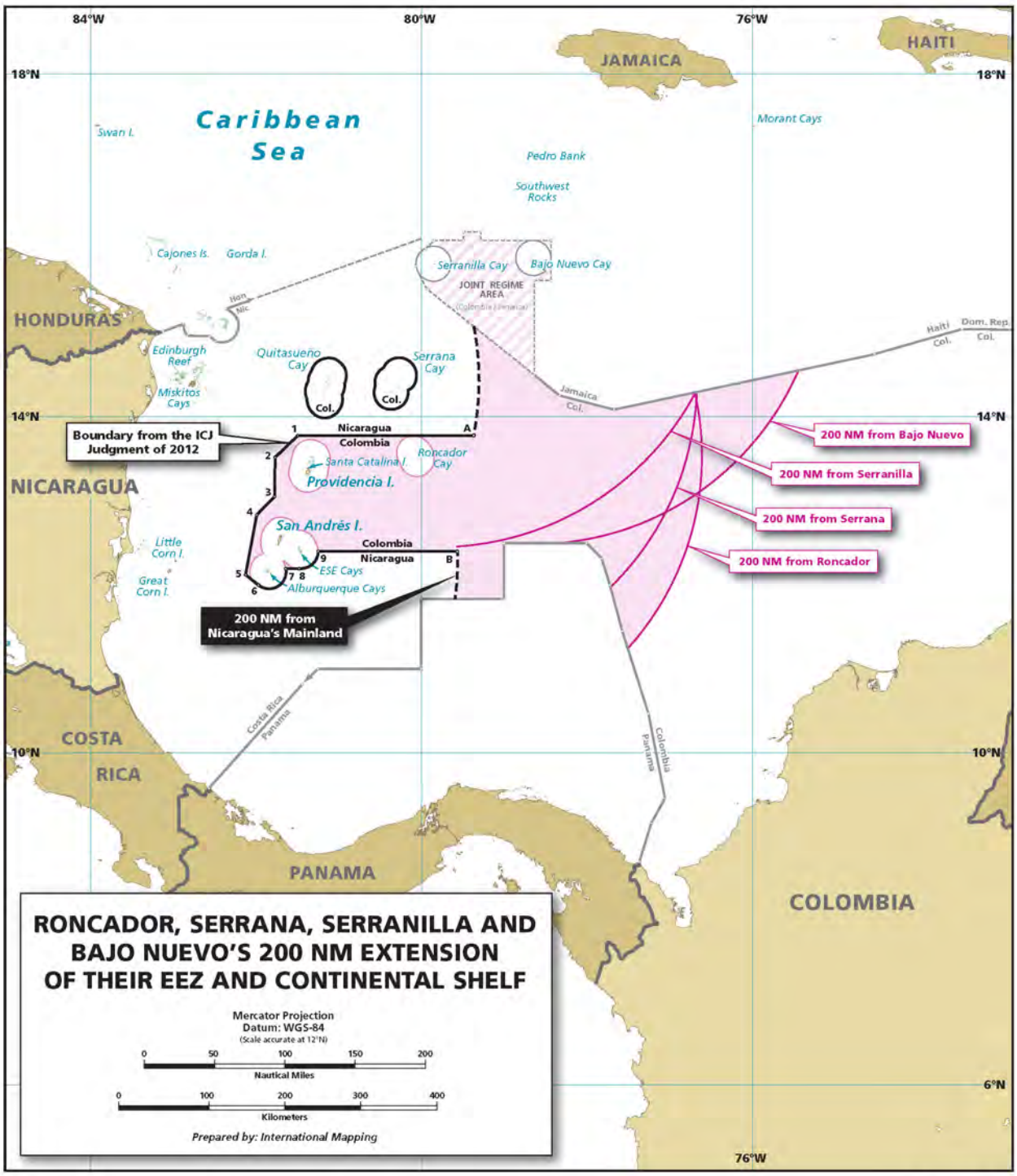

84°W
80°W
76°W
18°N
14°N
10°N
6°N
JAMAICA
HAITI
Caribbean Sea
Swan I.
Morant Cays
Pedro Bank
Southwest Rocks
Cajones Is.
Gorda I.
Serranilla Cay
Bajo Nuevo Cay
JOINT REGIME AREA
(Colombia / Jamaica)
HONDURAS
Edinburgh Reef
Miskitos Cays
Quitasueño Cay
Serrana Cay
Col.
Col.
Haiti
Col.
Dom. Rep.
Col.
Jamaica
Col.
Boundary from the ICJ Judgment of 2012
1
Nicaragua
Colombia
A
2
3
4
Santa Catalina I.
Roncador Cay
Providencia I.
NICARAGUA
San Andrés I.
Little Corn I.
Great Corn I.
Colombia
Nicaragua
9
B
5
7 8
6
ESE Cays
Alburquerque Cays
200 NM from Nicaragua's Mainland
200 NM from Bajo Nuevo
200 NM from Serranilla
200 NM from Serrana
200 NM from Roncador
Costa Rica
Panama
Colombia
Panama
COSTA RICA
PANAMA
COLOMBIA
RONCADOR, SERRANA, SERRANILLA AND BAJO NUEVO'S 200 NM EXTENSION OF THEIR EEZ AND CONTINENTAL SHELF
Mercator Projection
Datum: WGS-84
(Scale accurate at 12°N)
0 50 100 150 200
Nautical Miles
0 100 200 300 400
Kilometers
Prepared by: International Mapping

Figure 4.4

Filfla Islet, MALTA

Figure 4.5

Quitasueño Cay (QS-32)

Figure 4.6

Rocas Alijos, MEXICO

Figure 4.7

Roca Partida, MEXICO

Figure 4.8

Rockall, U.K.

Figure 4.9

Ducie Island, U.K.

Figure 4.10

Oeno Atoll, U.K.

Figure 4.11

Aves Island, VENEZUELA

Figure 4.12

Figure 4.13

Figure 4.14

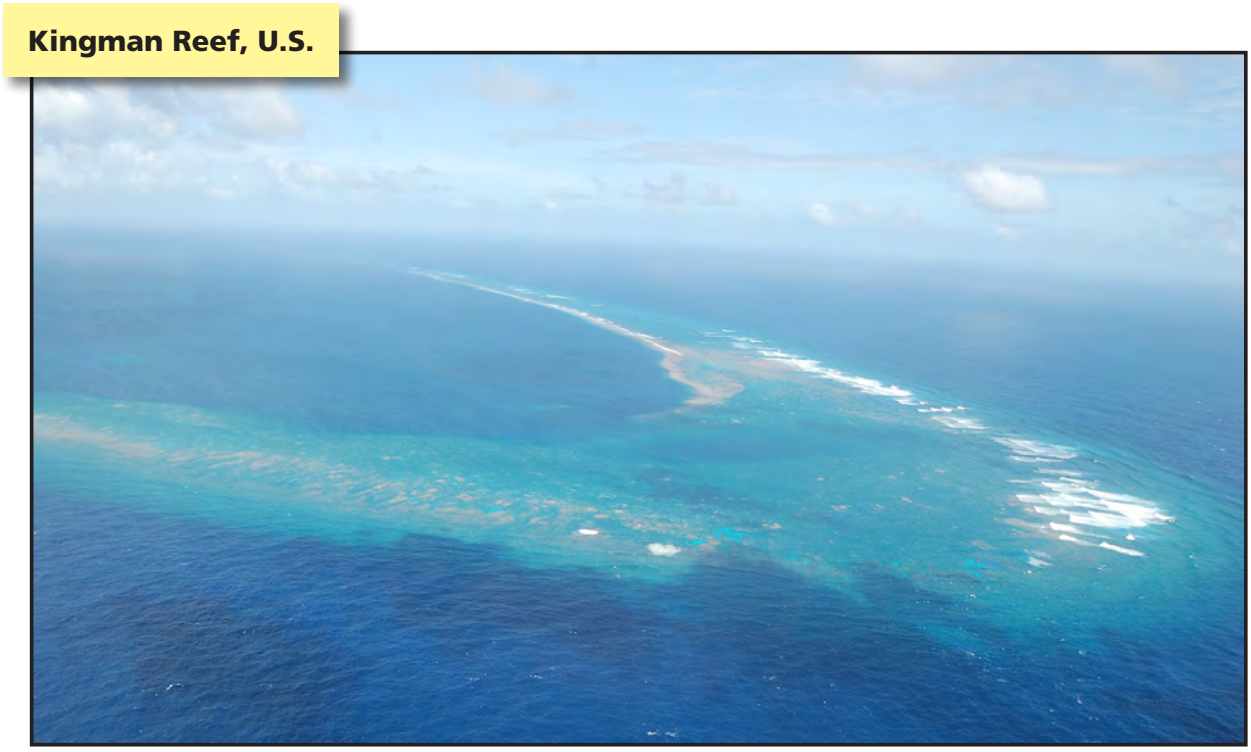


Figure 4.15

Figure 4.16

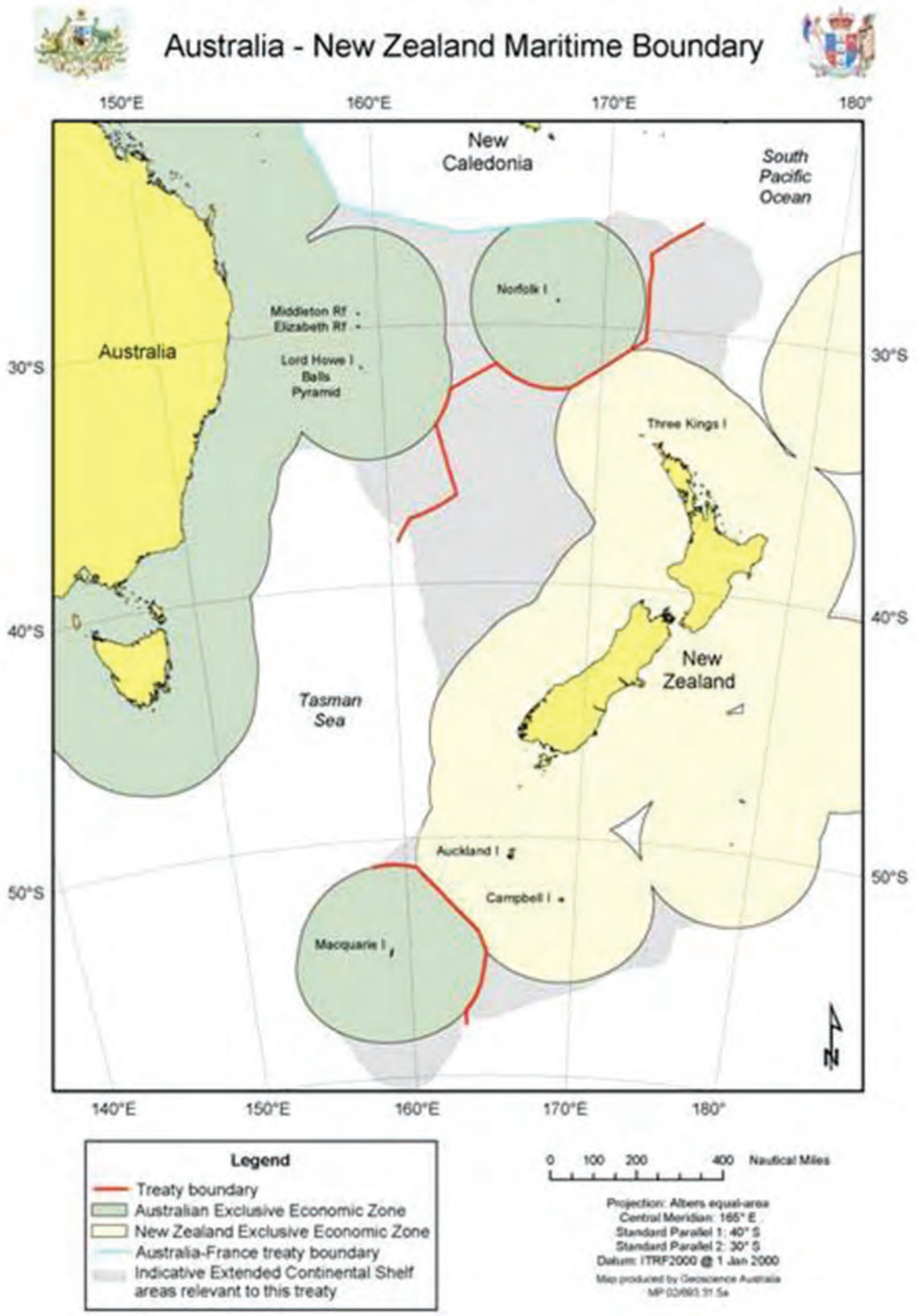

Australia - New Zealand Maritime Boundary
150°E
160°E
170°E
180°
New Caledonia
South Pacific Ocean
Norfolk I
Middleton Rf
Elizabeth Rf
Australia
Lord Howe I
Balls Pyramid
30°S
Three Kings I
40°S
New Zealand
Tasman Sea
Auckland I
Campbell I
50°S
Macquarie I
N
140°E
150°E
160°E
170°E
180°
Legend
Treaty boundary
Australian Exclusive Economic Zone
New Zealand Exclusive Economic Zone
Australia-France treaty boundary
Indicative Extended Continental Shelf areas relevant to this treaty
0 100 200 400 Nautical Miles
Projection: Albers equal-area
Central Meridian: 165° E
Standard Parallel 1: 40° S
Standard Parallel 2: 30° S
Datum: ITRF2000 @ 1 Jan 2000
Map produced by Geoscience Australia

Figure 4.17

Elizabeth Reef, AUSTRALIA

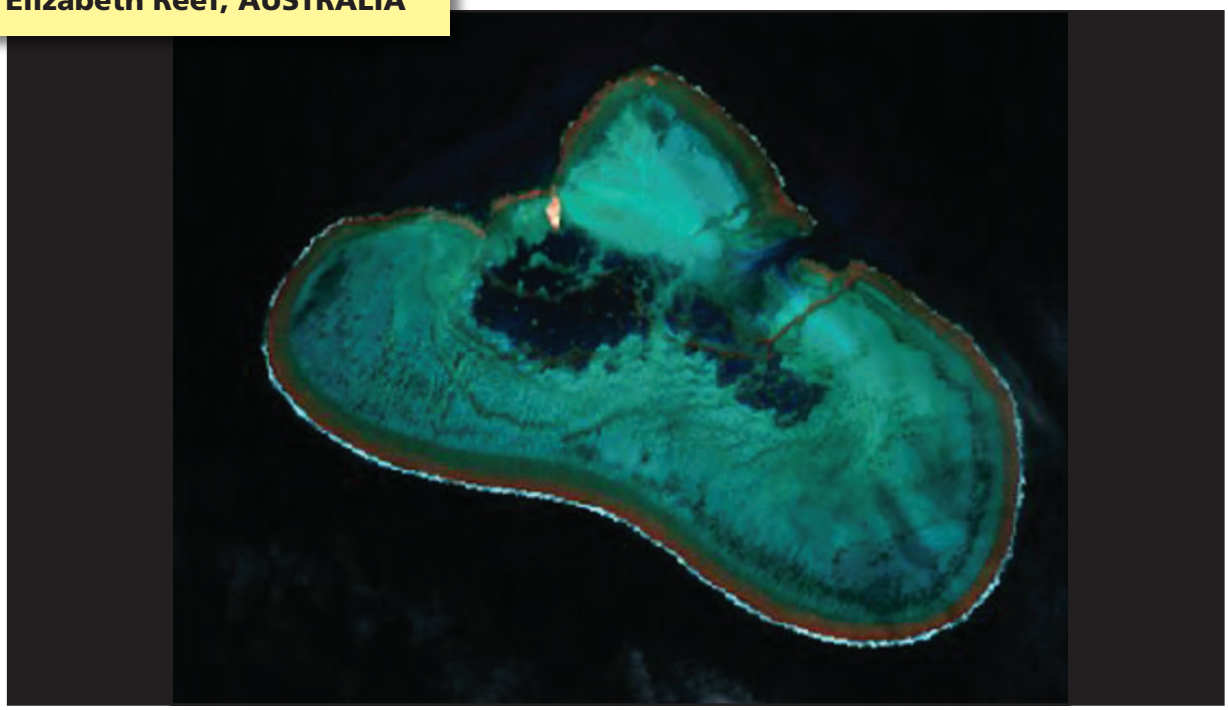


Figure 4.18

Ujelang Island, MARSHALL ISLANDS

Figure 4.19

Vostok Island, KIRIBATI

Figure 4.20

Flint Island, KIRIBATI

Figure 4.21

Tromelin Island, FRANCE

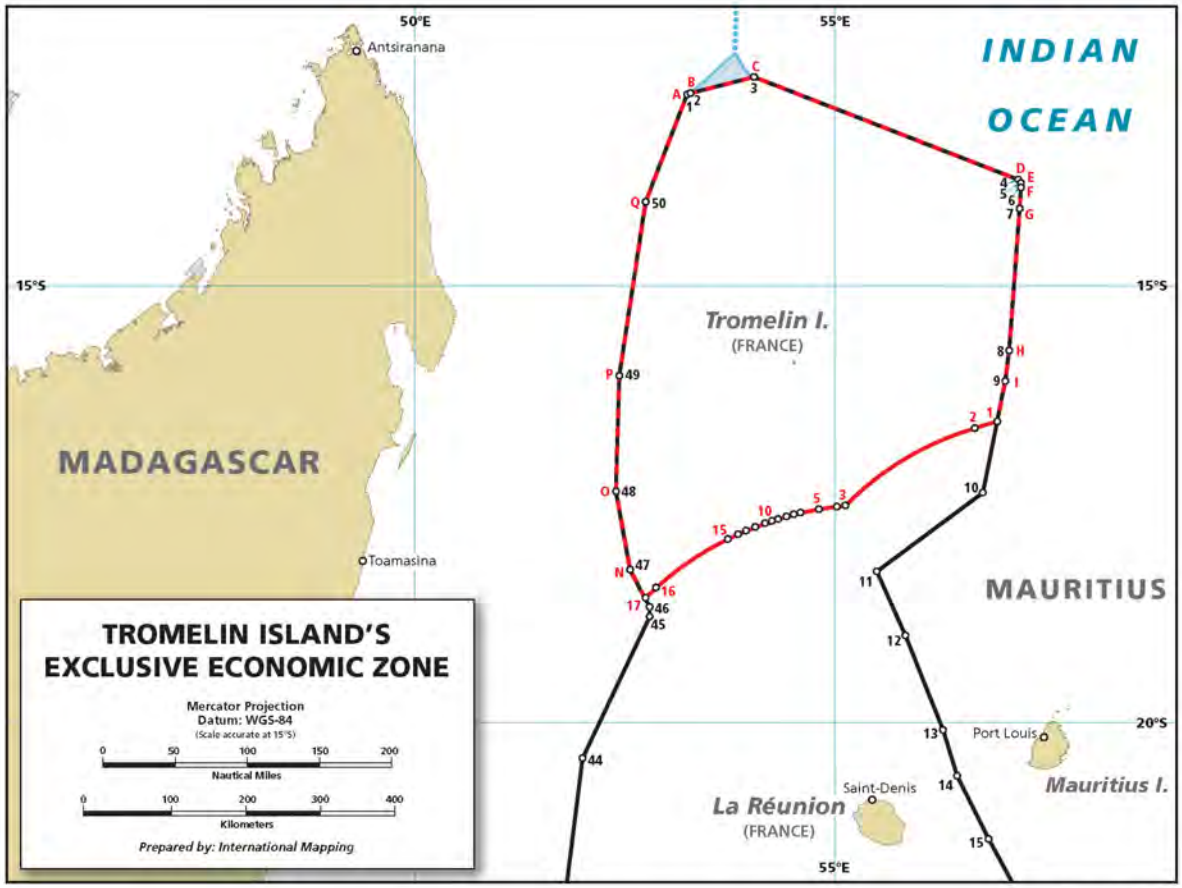


Figure 4.23

Clipperton Island, FRANCE

Figure 4.24

Matthew Island, FRANCE

Figure 4.25

Bassas da India, FRANCE

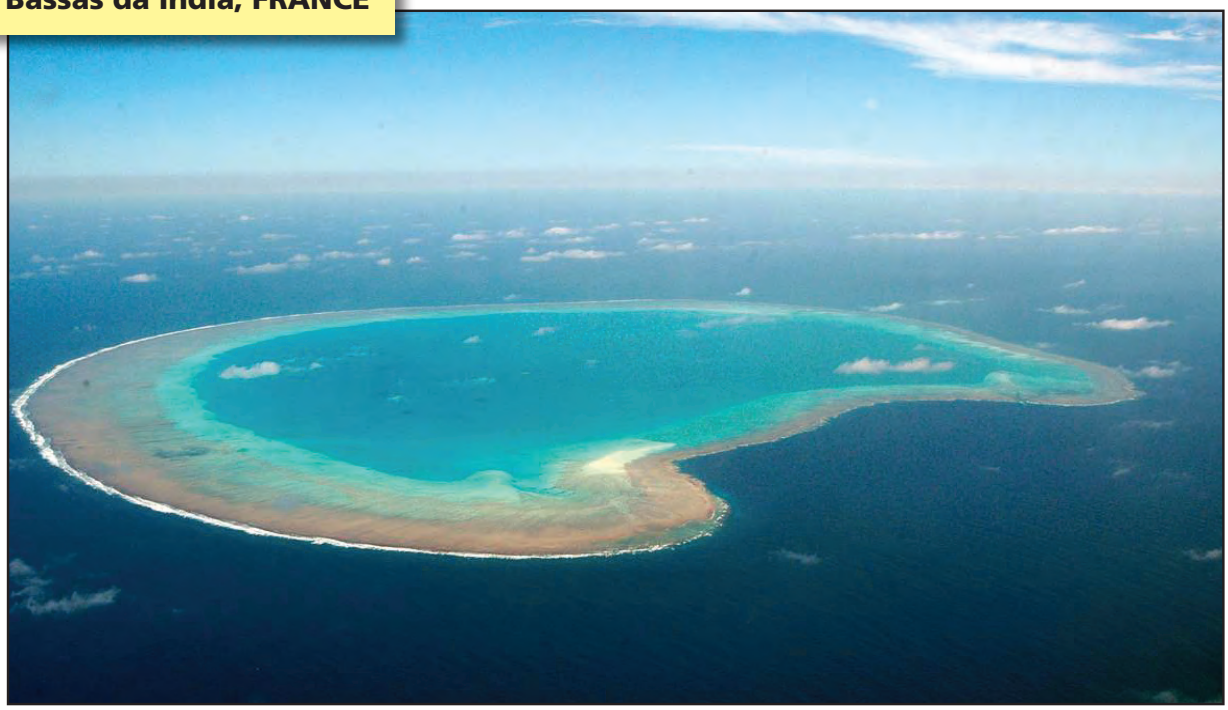


Figure 4.26

McKean Island, KIRIBATI

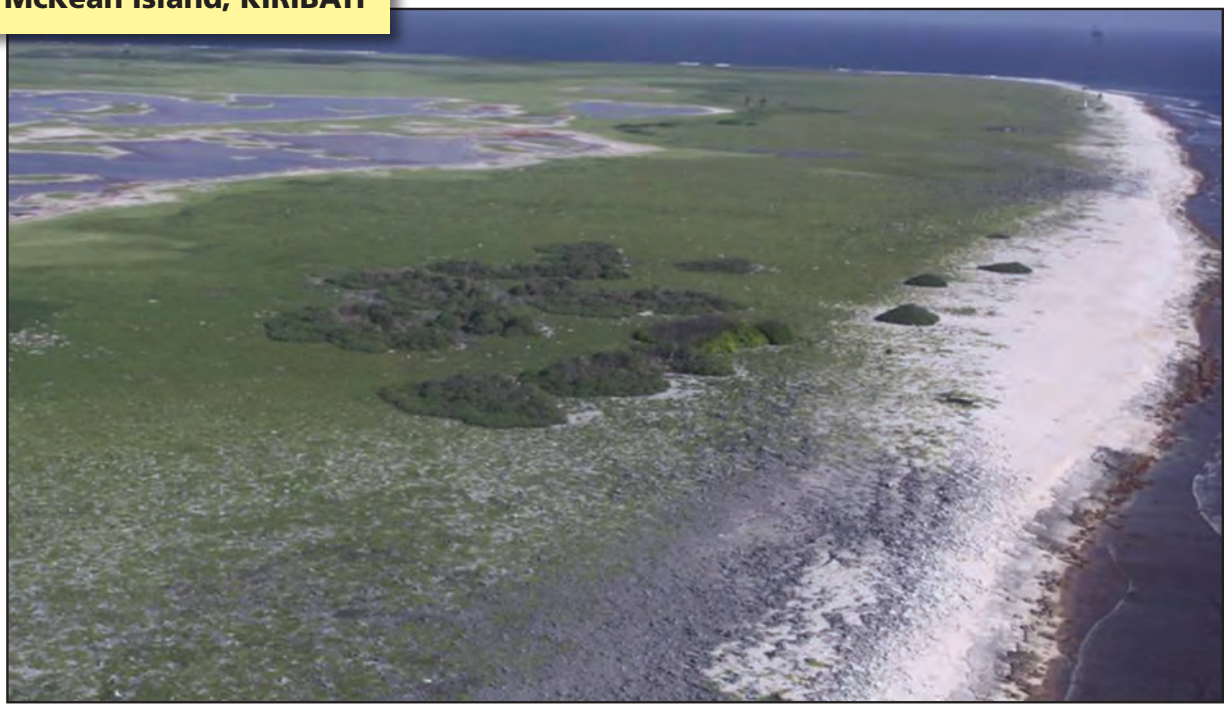


Figure 4.27

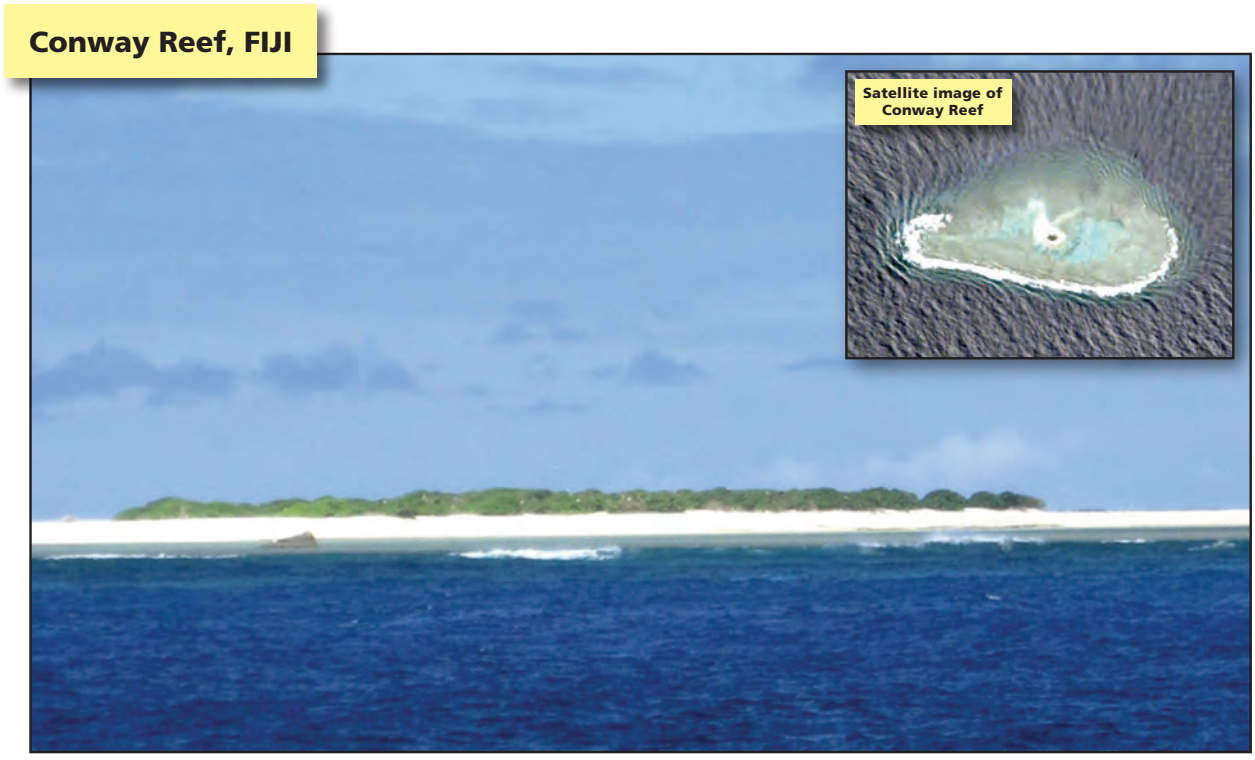


Figure 4.28

Okinotorishima, JAPAN

Okinotorishima, JAPAN

Figure 4.29

Okinotorishima, JAPAN

Figure 4.30

Minamitorishima, JAPAN

Figure 4.31

Pedra Branca, SINGAPORE

Figure 4.32

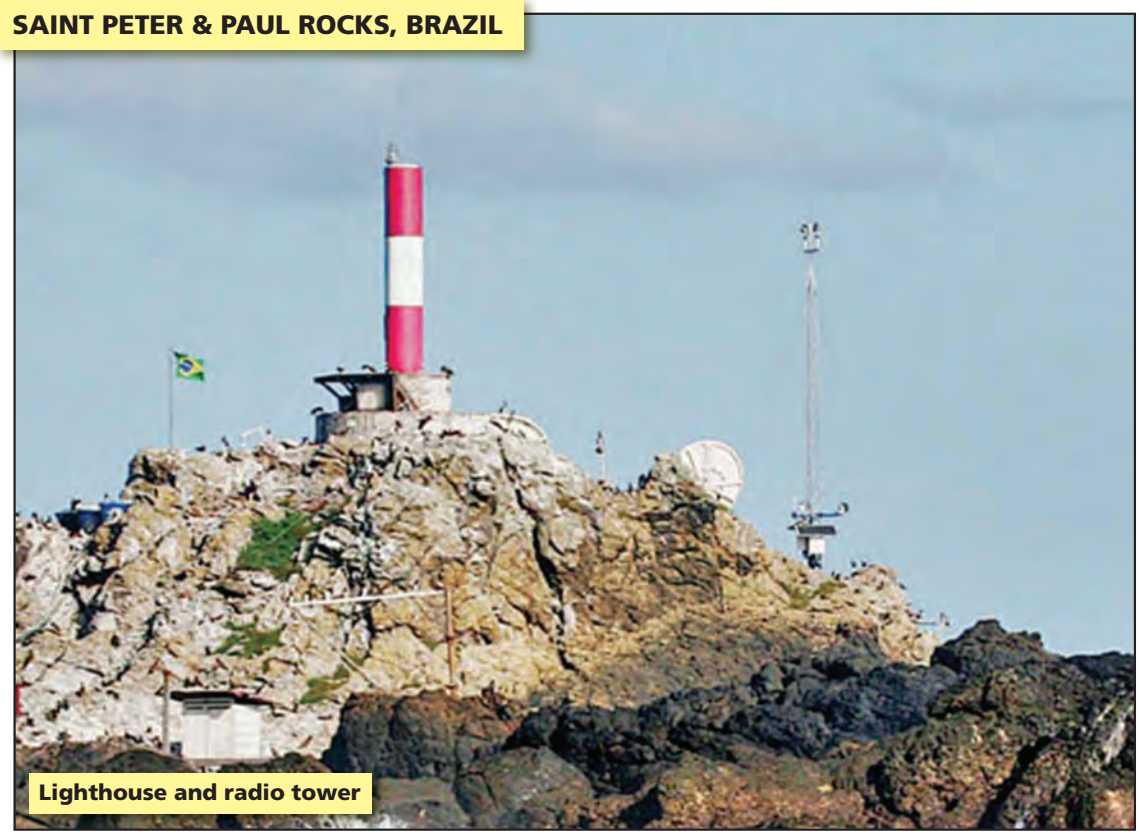
Aves Island, VENEZUELA

Figure 4.33

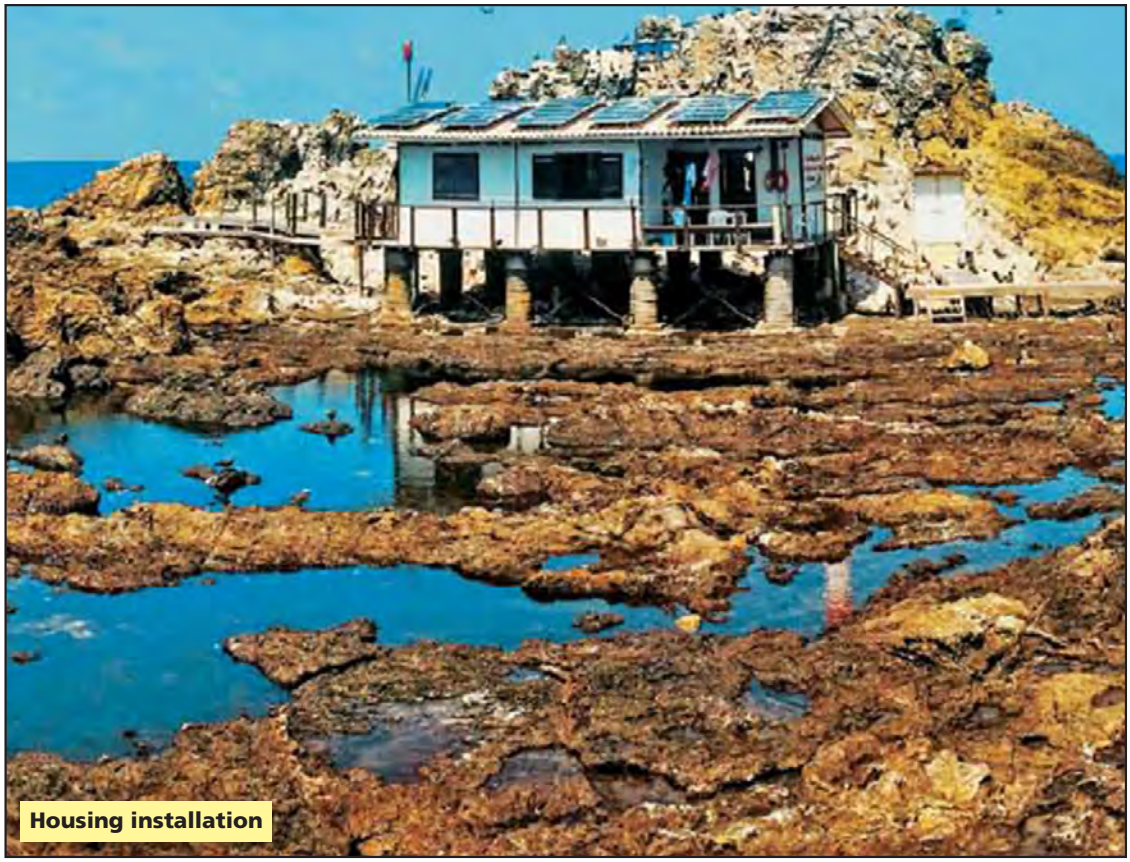
Saint Peter & Paul Rocks, BRAZIL

Figure 4.34

SAINT PETER & PAUL ROCKS, BRAZIL



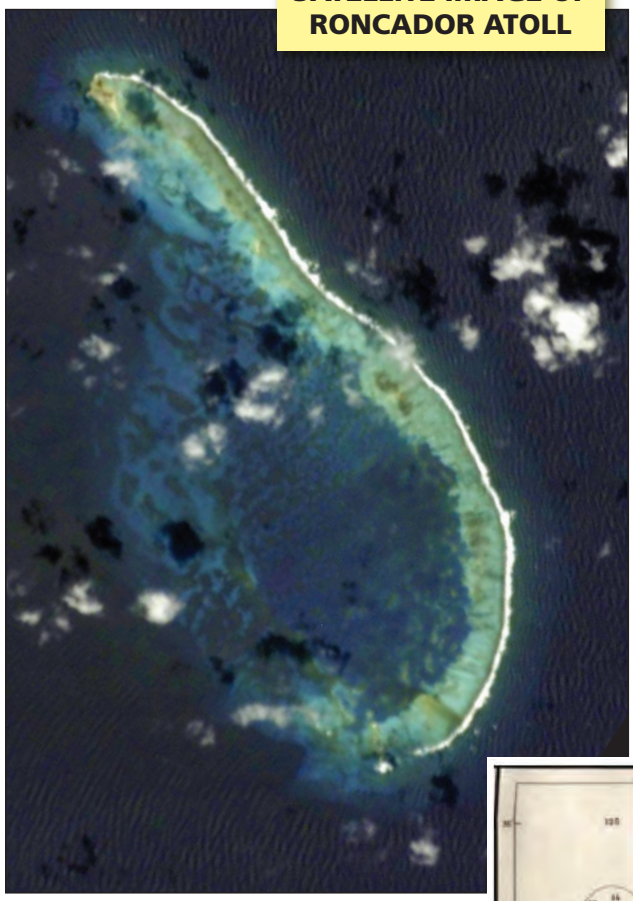
Lighthouse and radio tower



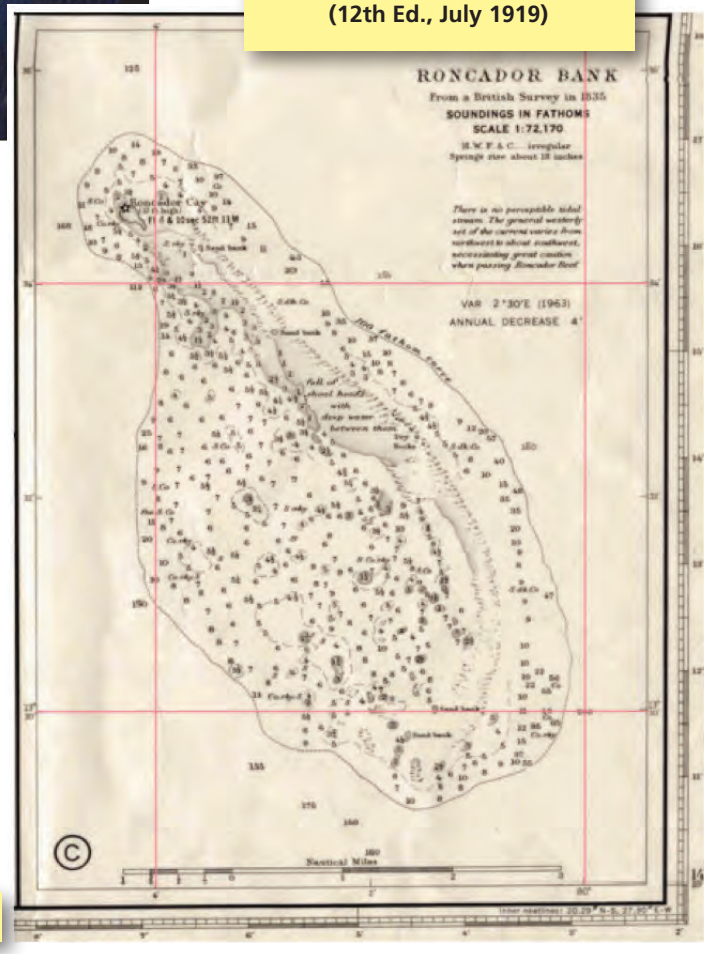
Housing installation

Figure 4.35

SATELLITE IMAGE OF RONCADOR ATOLL



U.S. NAVAL CHART 1374
(12th Ed., July 1919)



Excerpt: Inset "C" from original chart

Figure 4.36

Figure 4.37


RONCADOR CAY
RONCADOR
COLOMBIA
INFANTERIA DE MARINA
FARO
RONCADOR

Figure 4.38

RONCADOR CAY DETACHMENT

Figure 4.39

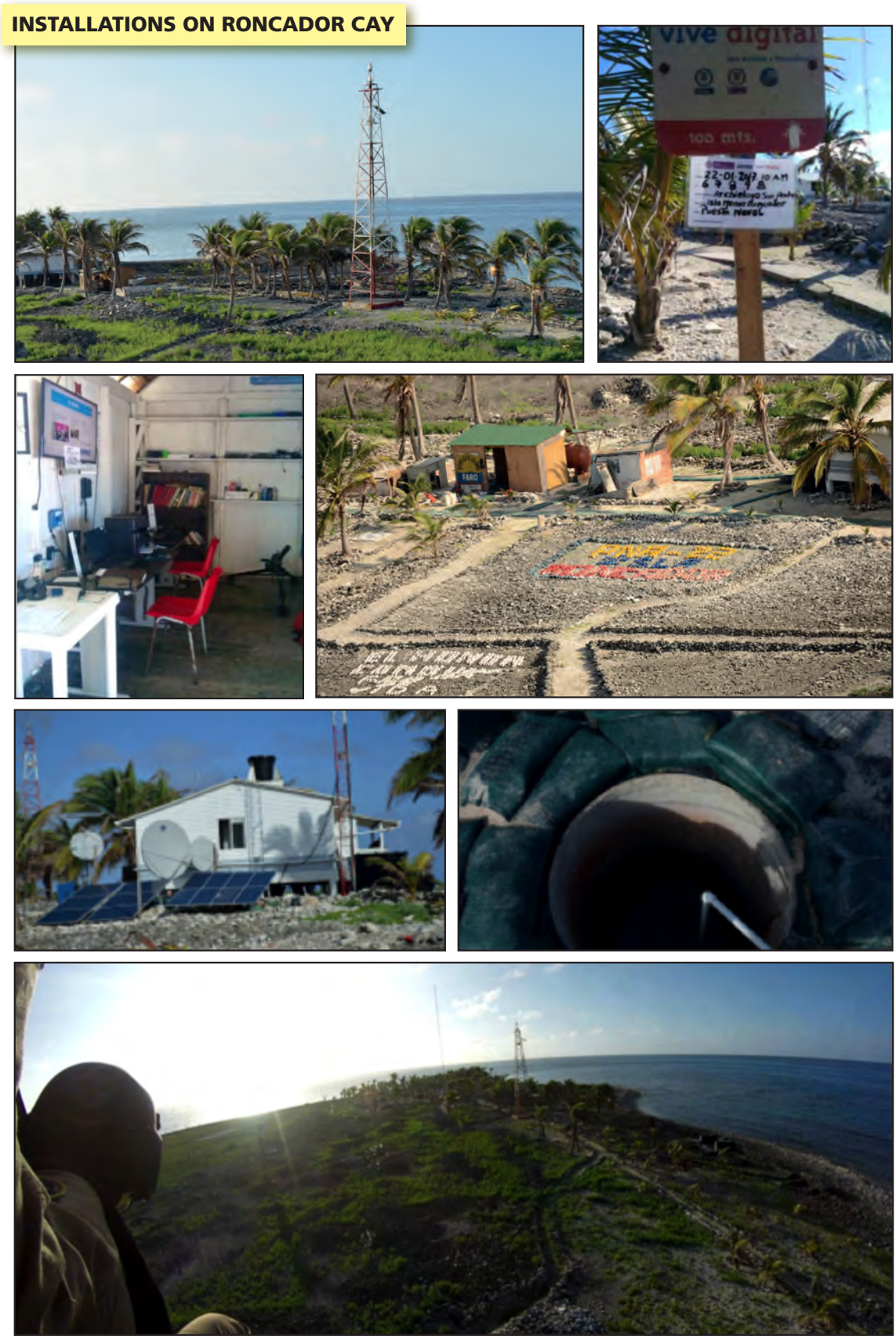


Figure 4.40

Figure 4.41

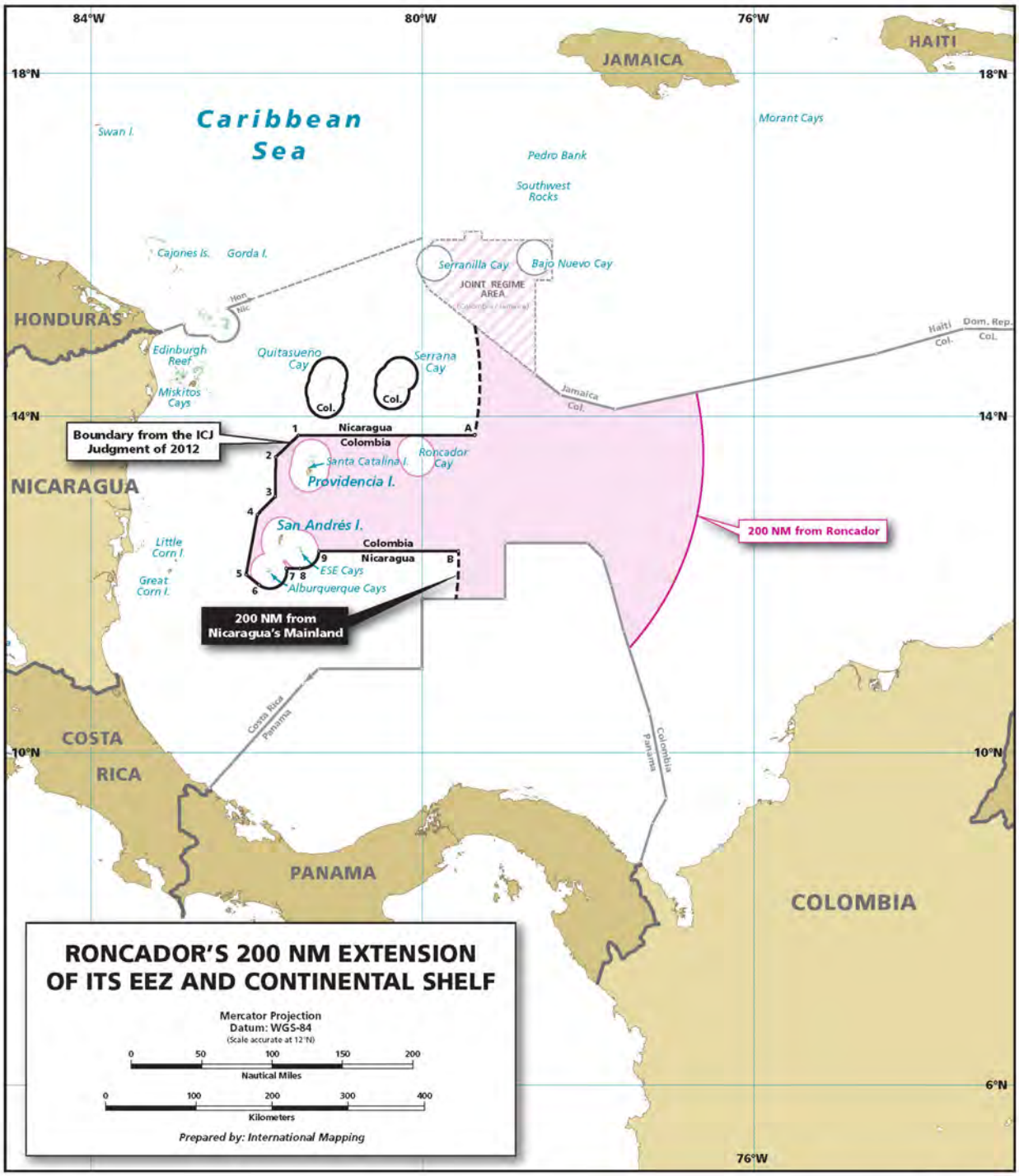
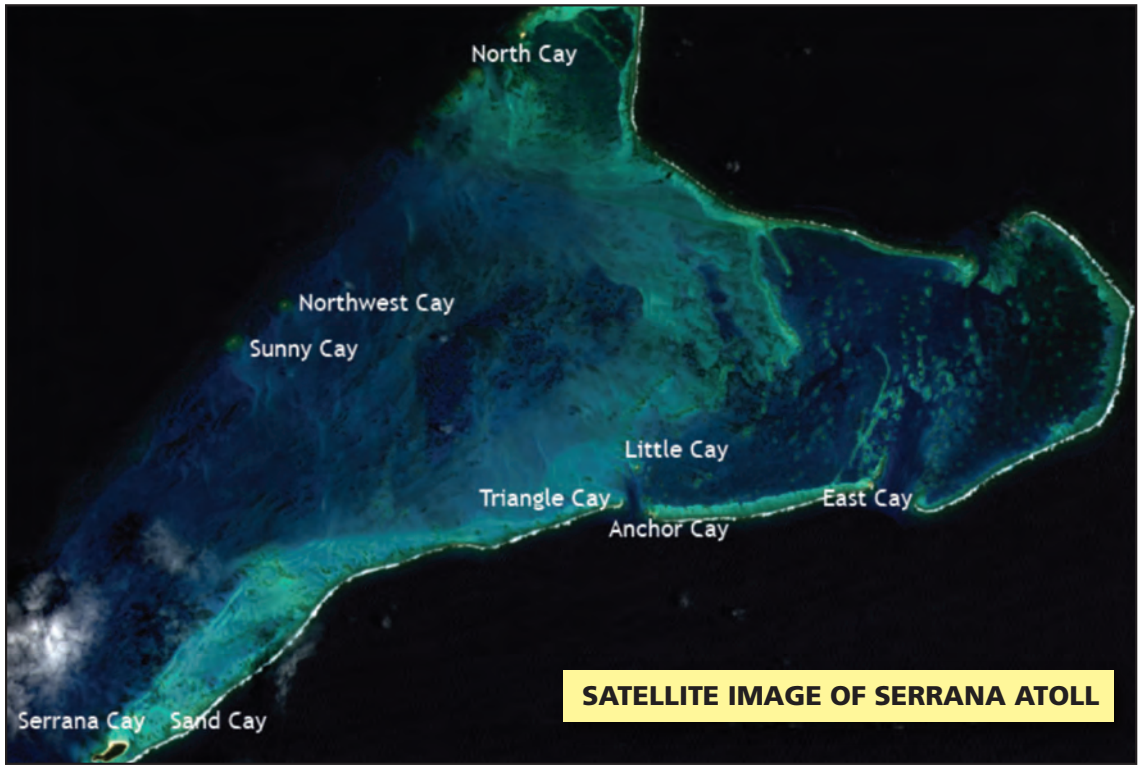

84°W
80°W
76°W
18°N
14°N
10°N
6°N
JAMAICA
HAITI
Caribbean Sea
Swan I.
Morant Cays
Pedro Bank
Southwest Rocks
Cajones Is.
Gorda I.
Serranilla Cay
Bajo Nuevo Cay
JOINT REGIME AREA
HONDURAS
Edinburgh Reef
Miskitos Cays
Quitasueño Cay
Serrana Cay
Col.
Col.
Haiti Col.
Dom. Rep. Col.
Jamaica Col.
Boundary from the ICJ Judgment of 2012
1
Nicaragua
Colombia
A
2
3
4
Santa Catalina I.
Roncador Cay
Providencia I.
NICARAGUA
San Andrés I.
Little Corn I.
Great Corn I.
Colombia
9
Nicaragua
B
5
6
7 8
ESE Cays
Alburquerque Cays
200 NM from Roncador
200 NM from Nicaragua's Mainland
Costa Rica Panama
Colombia Panama
COSTA RICA
PANAMA
COLOMBIA
RONCADOR'S 200 NM EXTENSION OF ITS EEZ AND CONTINENTAL SHELF
Mercator Projection
Datum: WGS-84
(Scale accurate at 12°N)
0 50 100 150 200
Nautical Miles
0 100 200 300 400
Kilometers
Prepared by: International Mapping

Figure 4.42


North Cay
Northwest Cay
Sunny Cay
Little Cay
Triangle Cay
East Cay
Anchor Cay
Serrana Cay
Sand Cay
SATELLITE IMAGE OF SERRANA ATOLL

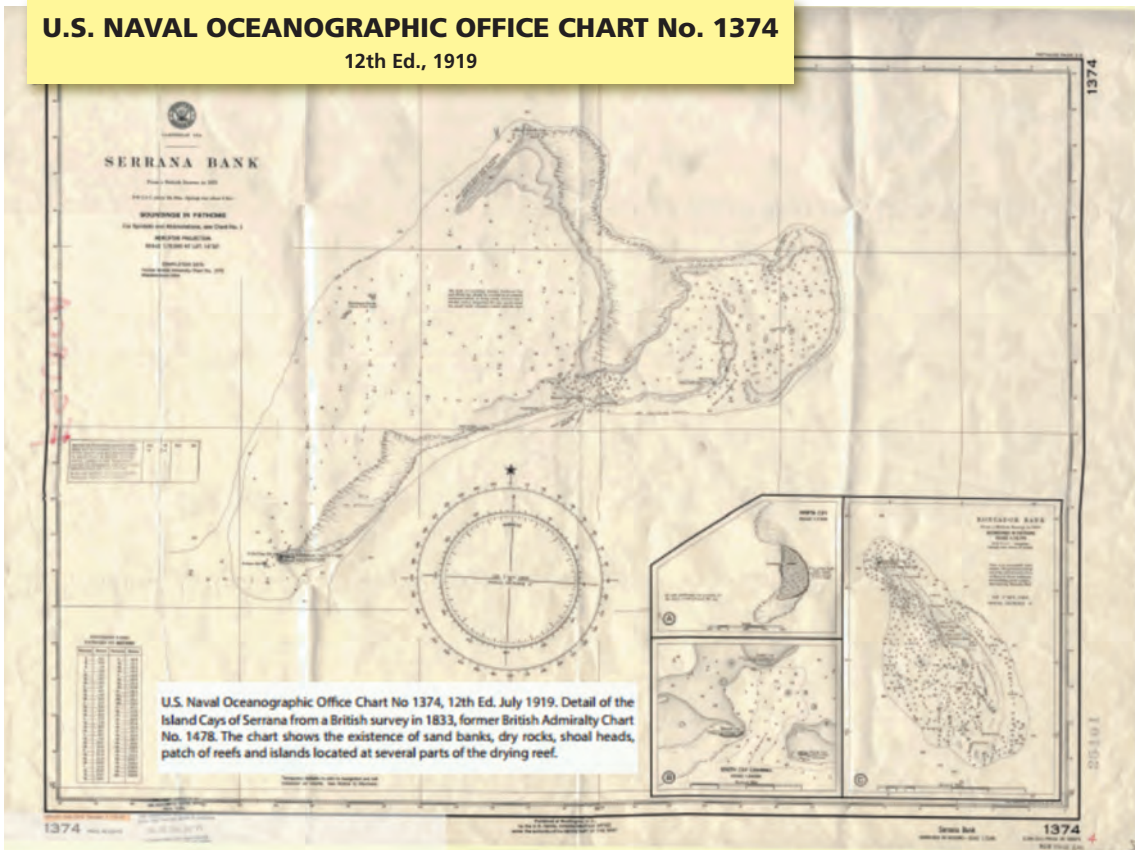

U.S. NAVAL OCEANOGRAPHIC OFFICE CHART No. 1374
12th Ed., 1919
SERRANA BANK
1374
U.S. Naval Oceanographic Office Chart No 1374, 12th Ed. July 1919. Detail of the Island Cays of Serrana from a British survey in 1833, former British Admiralty Chart No. 1478. The chart shows the existence of sand banks, dry rocks, shoal heads, patch of reefs and islands located at several parts of the drying reef.
1374
1374

Figure 4.43

AERIAL PHOTOGRAPHS OF SERRANA CAY

Figure 4.44

SERRANA CAY

Figure 4.45

INSTALLATIONS ON SERRANA CAY

Figure 4.46

Figure 4.47

PHOTOGRAPHS OF SERRANA CAY

Figure 4.48

Figure 4.49

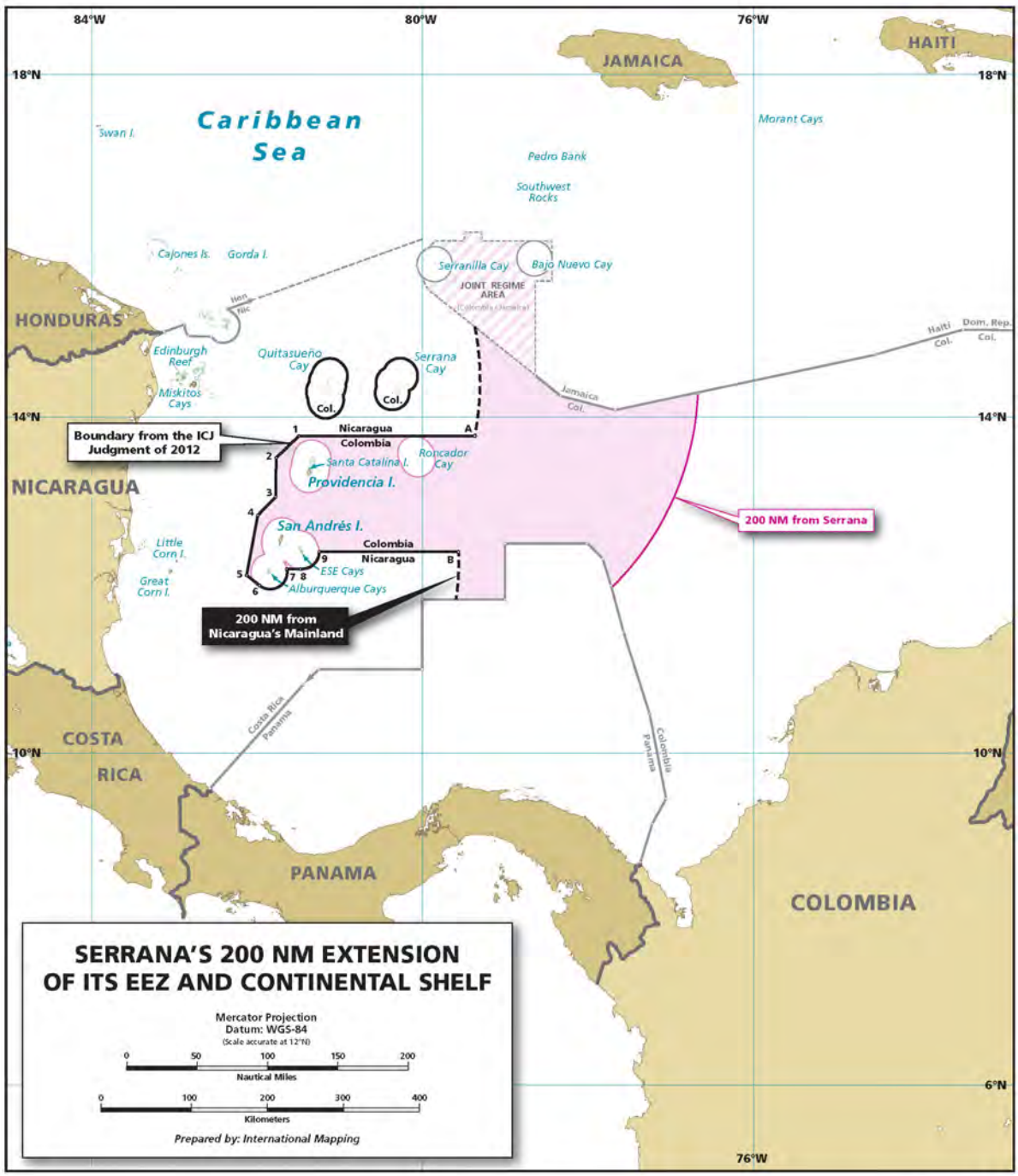
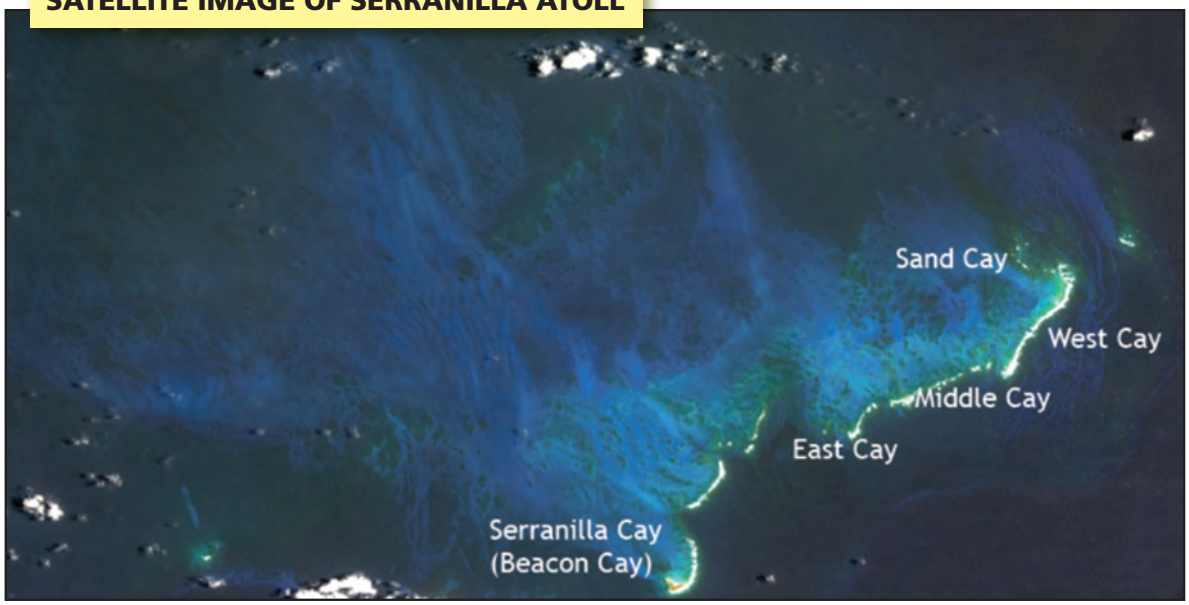

84°W
80°W
76°W
18°N
14°N
10°N
6°N
JAMAICA
HAITI
Caribbean Sea
Swan I.
Morant Cays
Pedro Bank
Southwest Rocks
Cajones Is.
Gorda I.
Serranilla Cay
Bajo Nuevo Cay
JOINT REGIME AREA
HONDURAS
Edinburgh Reef
Miskitos Cays
Quitasueño Cay
Serrana Cay
Col.
Haiti
Dom. Rep.
Jamaica
Boundary from the ICJ Judgment of 2012
Nicaragua
Colombia
Santa Catalina I.
Roncador Cay
Providencia I.
NICARAGUA
San Andrés I.
Little Corn I.
Great Corn I.
ESE Cays
Alburquerque Cays
200 NM from Serrana
200 NM from Nicaragua's Mainland
Costa Rica
Panama
COSTA RICA
PANAMA
COLOMBIA
SERRANA'S 200 NM EXTENSION OF ITS EEZ AND CONTINENTAL SHELF
Mercator Projection
Datum: WGS-84
(Scale accurate at 12°N)
0 50 100 150 200
Nautical Miles
0 100 200 300 400
Kilometers
Prepared by: International Mapping

Figure 4.50

SATELLITE IMAGE OF SERRANILLA ATOLL



U.S. NAVAL OCEANOGRAPHIC OFFICE CHART No. 1489

12th Ed., 1920

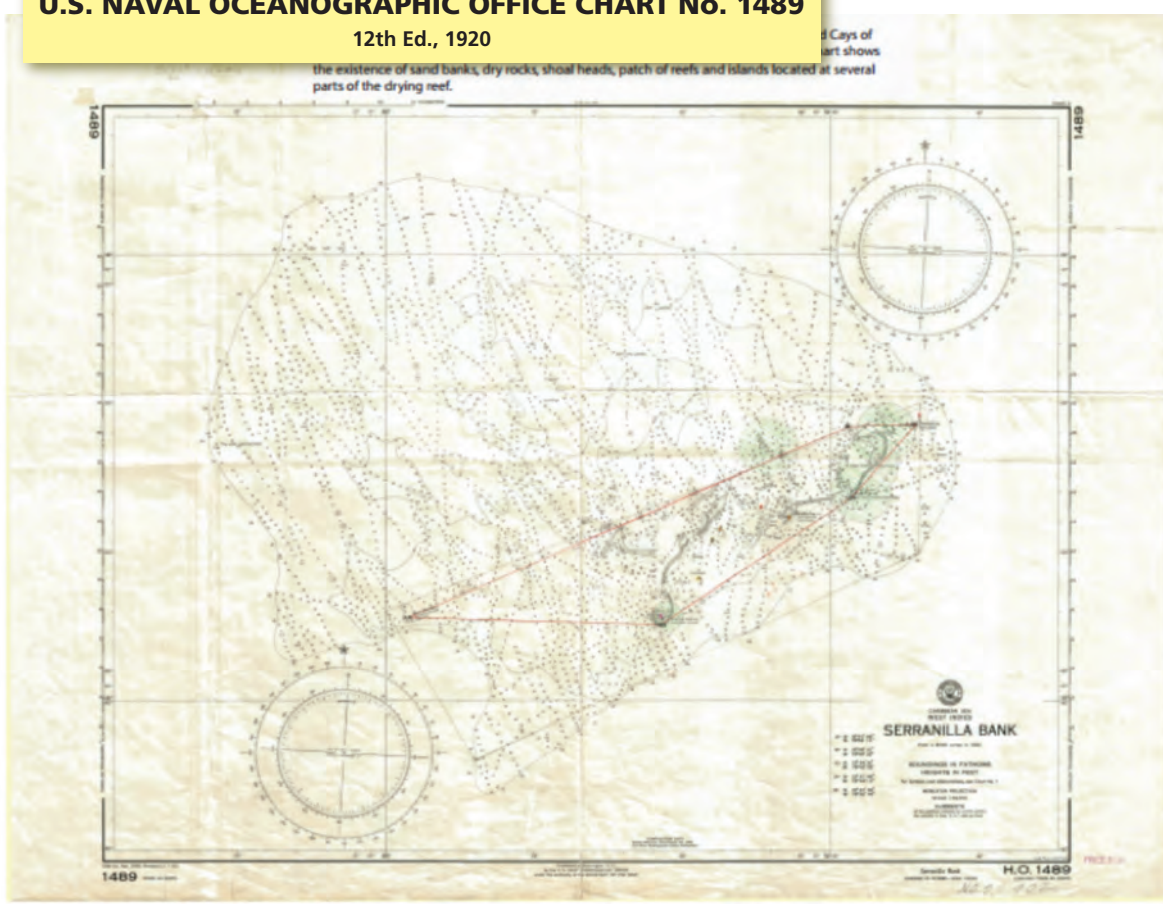


Figure 4.51

AERIAL PHOTOGRAPHS OF SERRANILLA CAY

Figure 4.52

SERRANILLA CAY

Figure 4.53

PHOTOGRAPHS OF SERRANILLA CAY

Figure 4.54

PHOTOGRAPHS OF SERRANILLA CAY

Figure 4.55

Figure 4.56

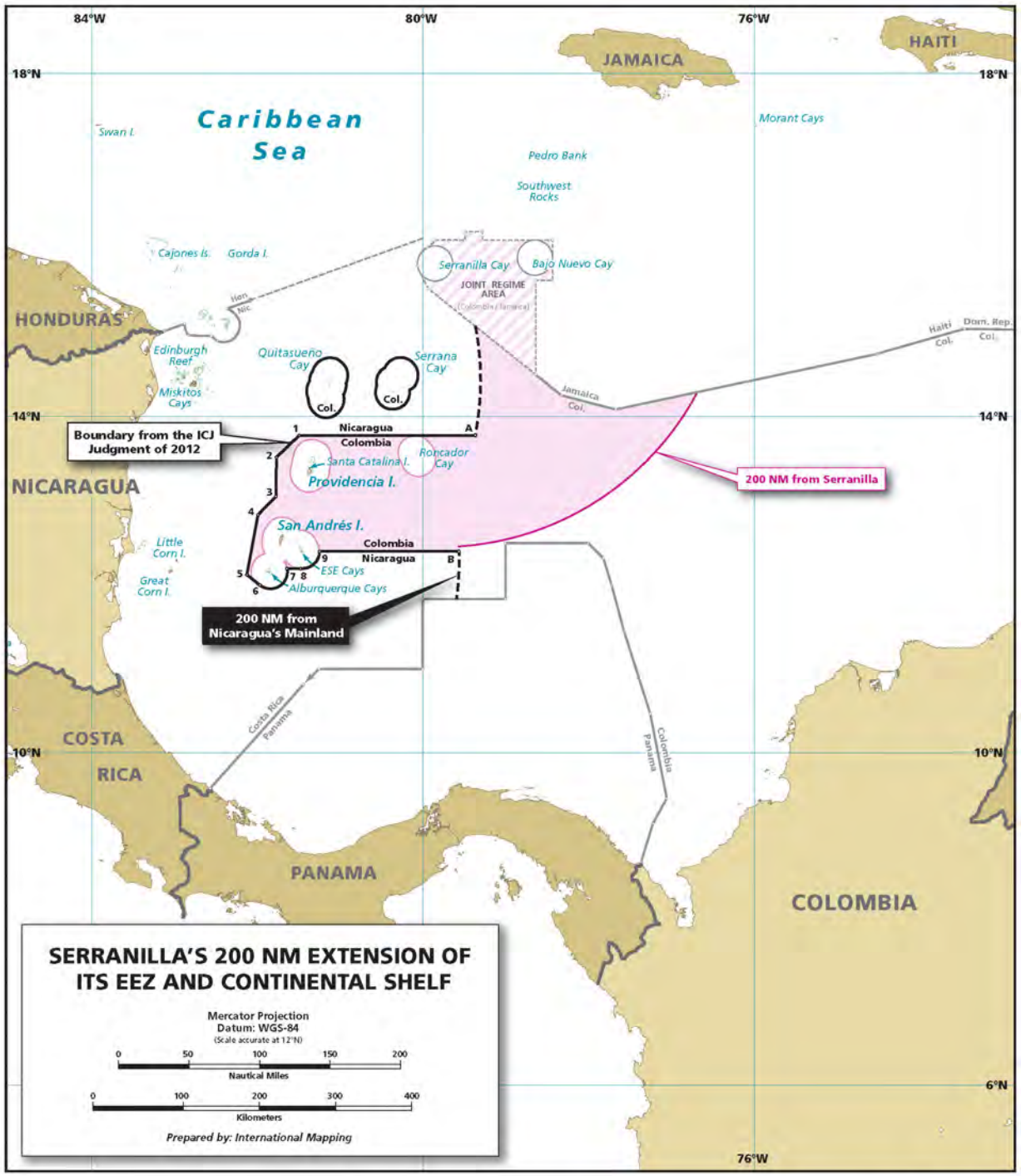
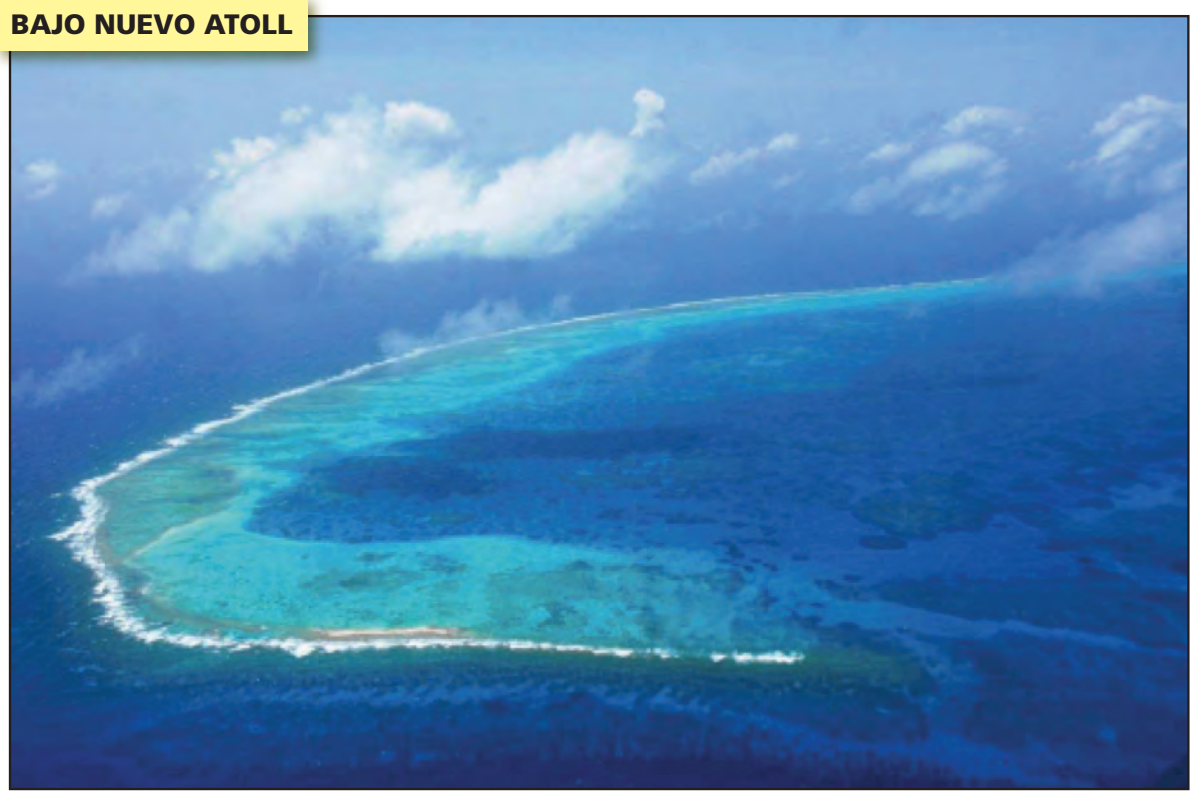

84°W
80°W
76°W
18°N
14°N
10°N
6°N
JAMAICA
HAITI
Caribbean Sea
Swan I.
Morant Cays
Pedro Bank
Southwest Rocks
Cajones Is.
Gorda I.
Serranilla Cay
Bajo Nuevo Cay
JOINT REGIME AREA
HONDURAS
Edinburgh Reef
Miskitos Cays
Quitasueño Cay
Serrana Cay
Col.
Haiti
Dom. Rep.
Jamaica
Boundary from the ICJ Judgment of 2012
Nicaragua
Colombia
A
B
Santa Catalina I.
Roncador Cay
Providencia I.
NICARAGUA
San Andrés I.
Little Corn I.
Great Corn I.
ESE Cays
Alburquerque Cays
200 NM from Serranilla
200 NM from Nicaragua's Mainland
Costa Rica
Panama
COSTA RICA
PANAMA
COLOMBIA
SERRANILLA'S 200 NM EXTENSION OF ITS EEZ AND CONTINENTAL SHELF
Mercator Projection
Datum: WGS-84
(Scale accurate at 12°N)
0 50 100 150 200
Nautical Miles
0 100 200 300 400
Kilometers
Prepared by: International Mapping

Figure 4.57

BAJO NUEVO ATOLL



SATELLITE IMAGE OF BAJO NUEVO

Figure 4.58

THE LIGHTHOUSE ON BAJO NUEVO

Figure 4.59

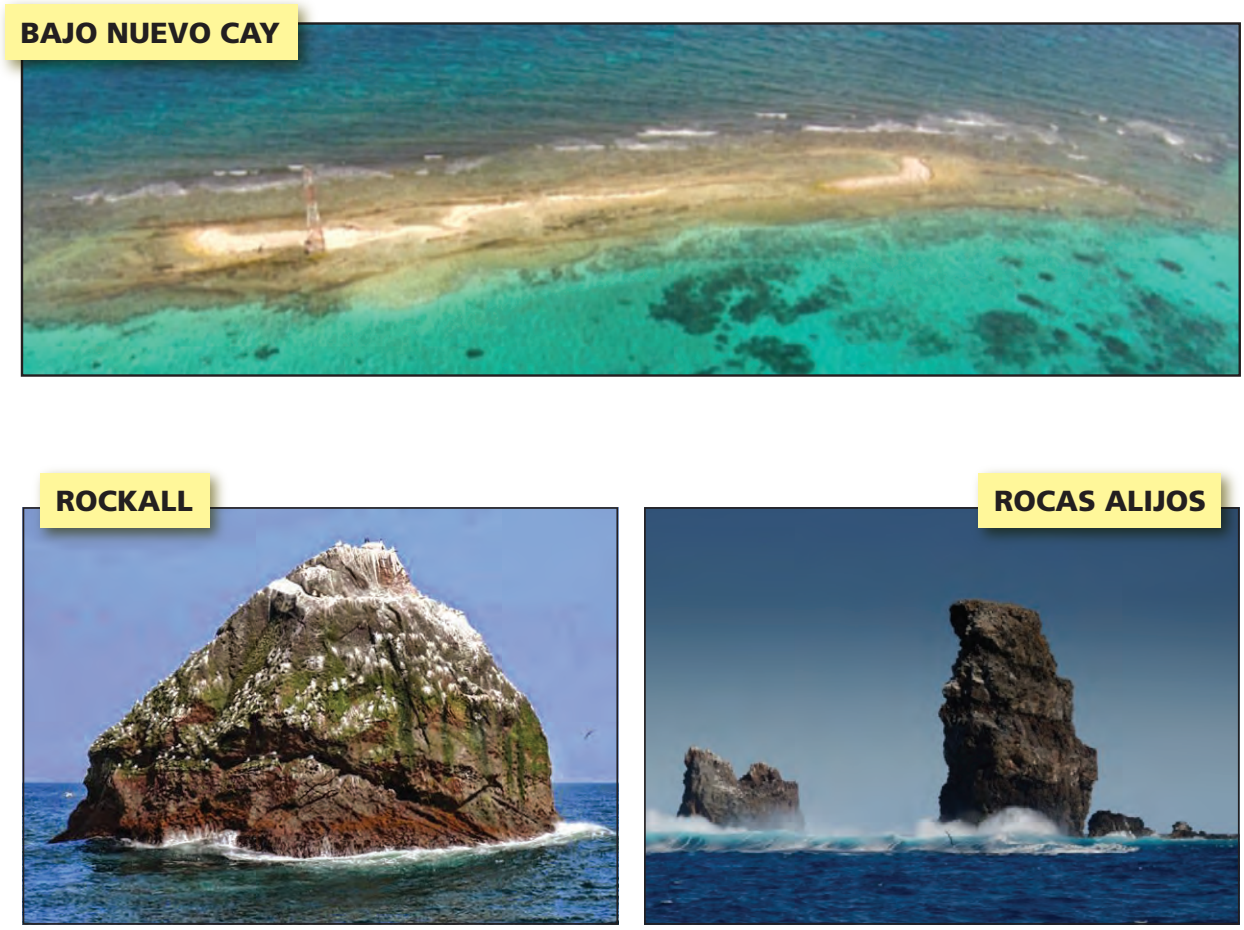


Figure 4.60

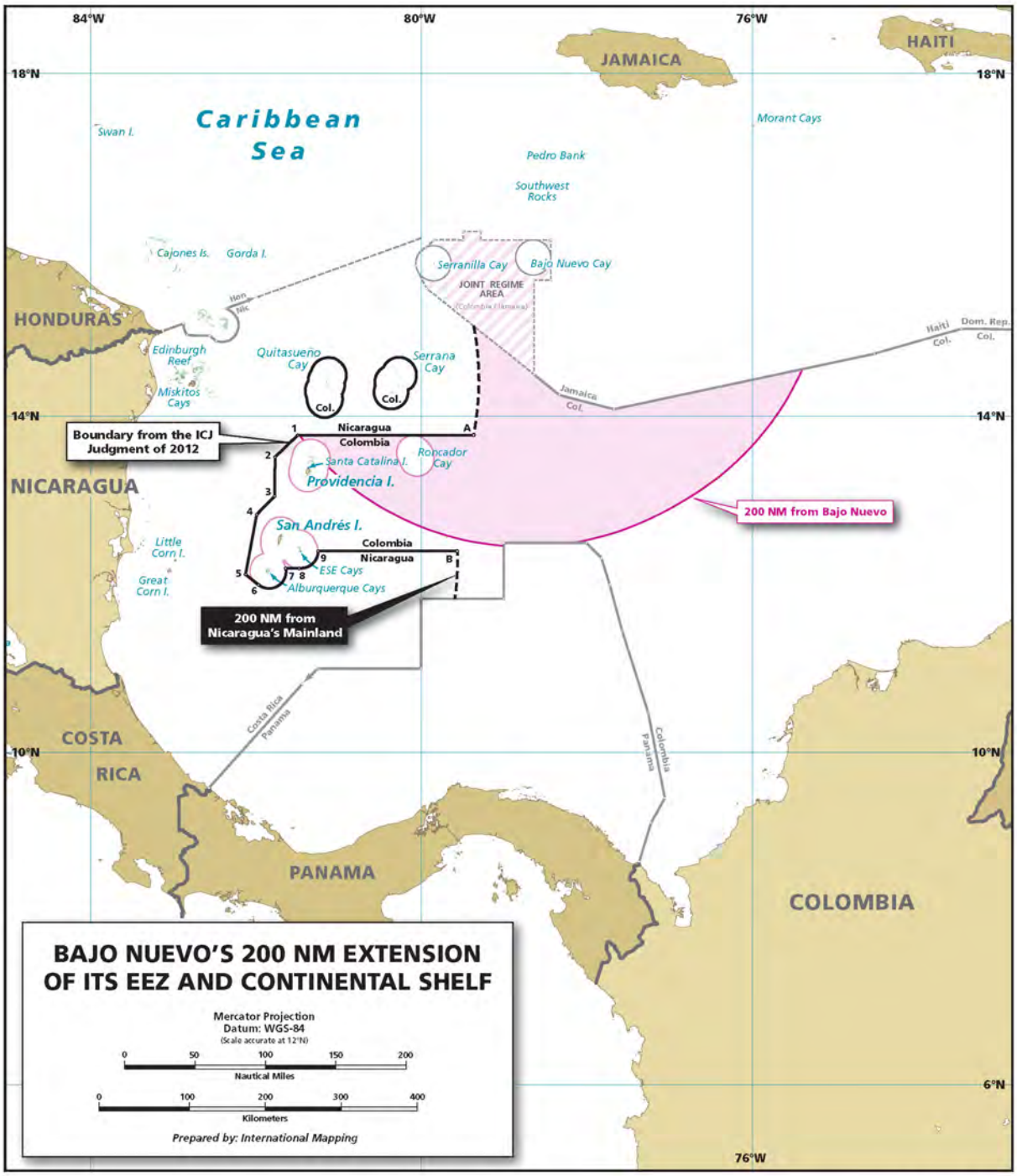

84°W
80°W
76°W
18°N
14°N
10°N
6°N
JAMAICA
HAITI
Caribbean Sea
Swan I.
Morant Cays
Pedro Bank
Southwest Rocks
Cajones Is.
Gorda I.
Serranilla Cay
Bajo Nuevo Cay
JOINT REGIME AREA
(Colombia/Jamaica)
HONDURAS
Edinburgh Reef
Miskitos Cays
Quitasueño Cay
Serrana Cay
Col.
Haiti
Dom. Rep.
Jamaica
Boundary from the ICJ Judgment of 2012
Nicaragua
Colombia
Santa Catalina I.
Roncador Cay
Providencia I.
NICARAGUA
200 NM from Bajo Nuevo
San Andrés I.
Little Corn I.
Great Corn I.
ESE Cays
Alburquerque Cays
200 NM from Nicaragua's Mainland
Costa Rica
Panama
COSTA RICA
PANAMA
COLOMBIA
BAJO NUEVO'S 200 NM EXTENSION OF ITS EEZ AND CONTINENTAL SHELF
Mercator Projection
Datum: WGS-84
(Scale accurate at 12°N)
0 50 100 150 200
Nautical Miles
0 100 200 300 400
Kilometers
Prepared by: International Mapping

Figure 4.61

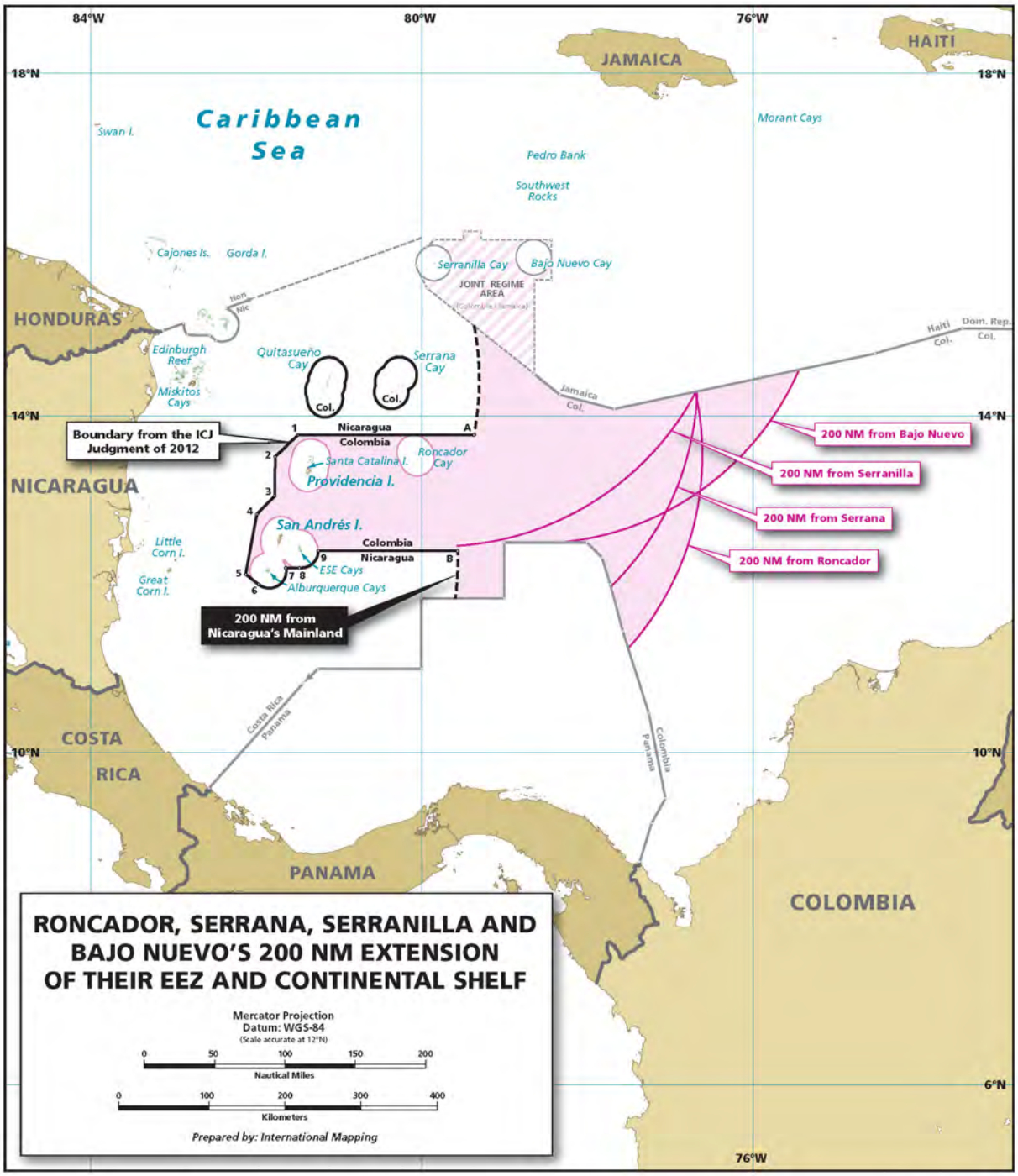

84°W
80°W
76°W
18°N
14°N
10°N
6°N
JAMAICA
HAITI
Caribbean Sea
Swan I.
Morant Cays
Pedro Bank
Southwest Rocks
Cajones Is.
Gorda I.
Serranilla Cay
Bajo Nuevo Cay
JOINT REGIME AREA
(Colombia | Jamaica)
HONDURAS
Edinburgh Reef
Quitasueño Cay
Serrana Cay
Miskitos Cays
Col.
Haiti
Dom. Rep.
Jamaica
Boundary from the ICJ Judgment of 2012
Nicaragua
Colombia
Santa Catalina I.
Roncador Cay
Providencia I.
NICARAGUA
San Andrés I.
Little Corn I.
Great Corn I.
ESE Cays
Alburquerque Cays
200 NM from Nicaragua's Mainland
200 NM from Bajo Nuevo
200 NM from Serranilla
200 NM from Serrana
200 NM from Roncador
Costa Rica
Panama
COSTA RICA
PANAMA
COLOMBIA
RONCADOR, SERRANA, SERRANILLA AND BAJO NUEVO'S 200 NM EXTENSION OF THEIR EEZ AND CONTINENTAL SHELF
Mercator Projection
Datum: WGS-84
(Scale accurate at 12°N)
Nautical Miles
Kilometers
Prepared by: International Mapping

Figure 4.62

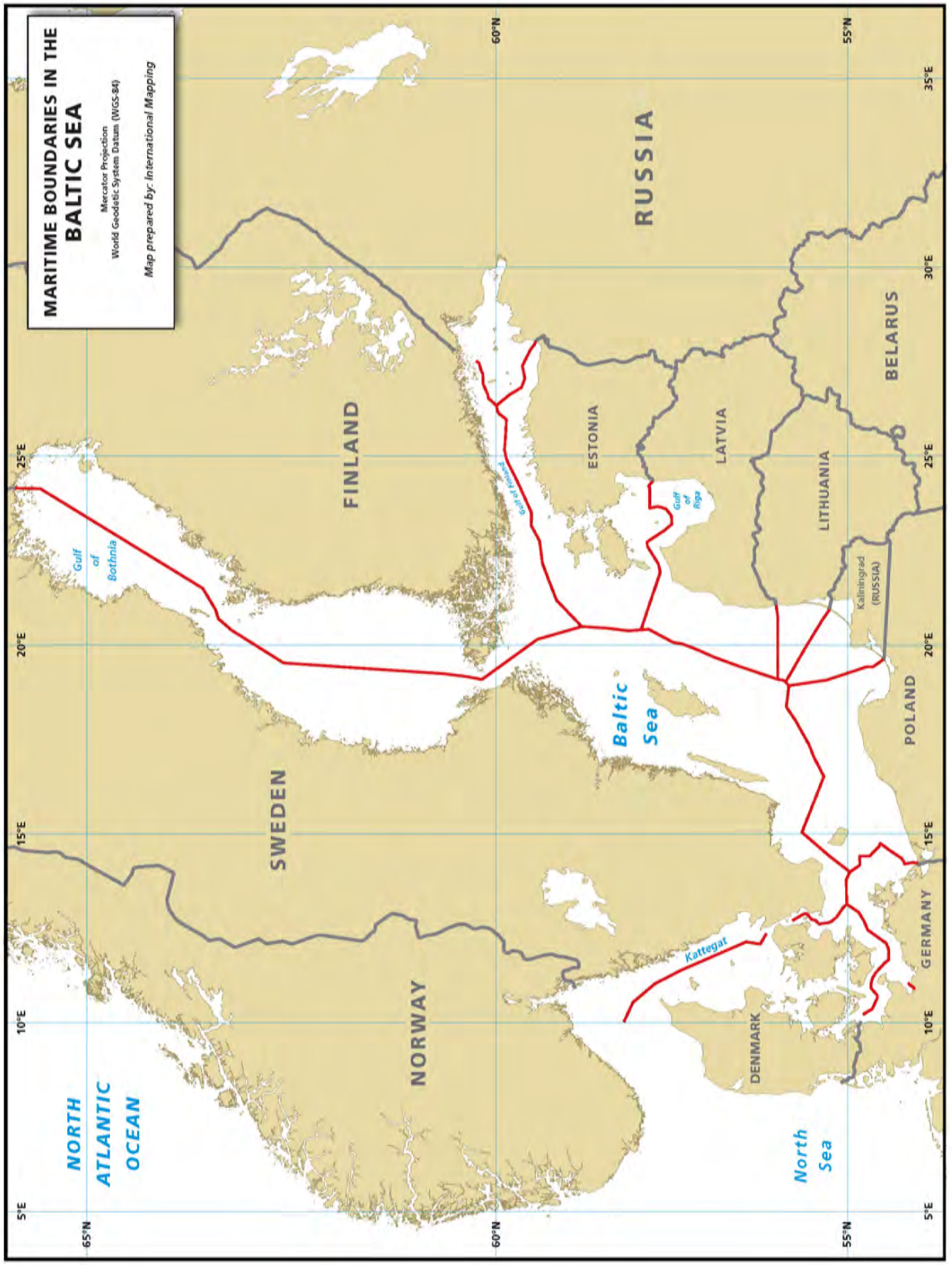

MARITIME BOUNDARIES IN THE
BALTIC SEA
Mercator Projection
World Geodetic System Datum (WGS-84)
Map prepared by: International Mapping
RUSSIA
FINLAND
SWEDEN
NORWAY
ESTONIA
LATVIA
LITHUANIA
BELARUS
POLAND
GERMANY
DENMARK
Baltic Sea
North Sea
NORTH ATLANTIC OCEAN
Gulf of Bothnia
Gulf of Finland
Gulf of Riga
Kattegat
Kaliningrad (RUSSIA)
65°N
60°N
55°N
5°E
10°E
15°E
20°E
25°E
30°E
35°E

Figure 5.1

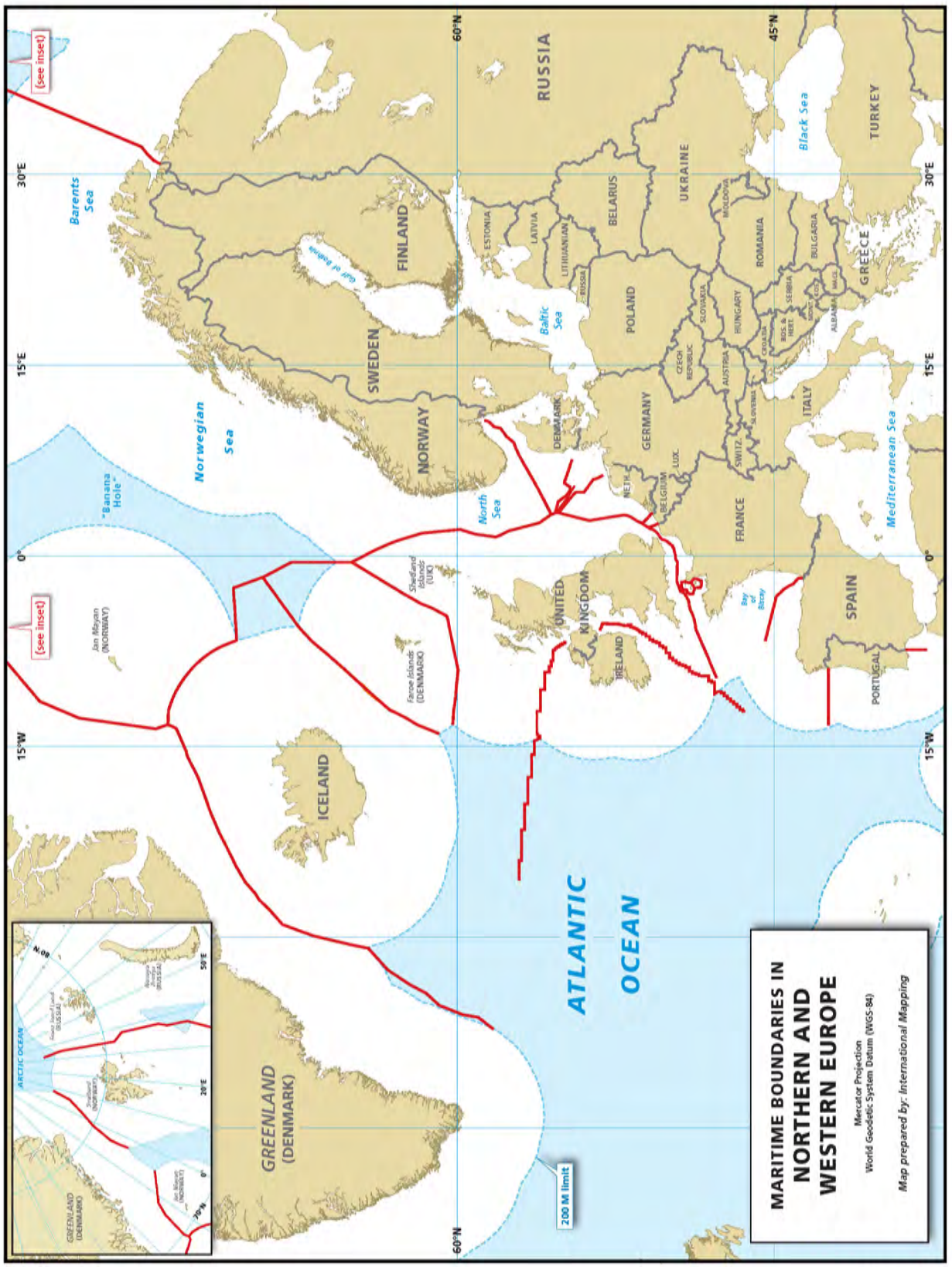

MARITIME BOUNDARIES IN
NORTHERN AND
WESTERN EUROPE
Mercator Projection
World Geodetic System Datum (WGS-84)
Map prepared by: International Mapping
200 M limit
ATLANTIC
OCEAN
Norwegian
Sea
Barents
Sea
North
Sea
Baltic
Sea
Black Sea
Mediterranean Sea
Banana
Hole
RUSSIA
FINLAND
SWEDEN
NORWAY
ESTONIA
LATVIA
LITHUANIAN
BELARUS
UKRAINE
POLAND
DENMARK
GERMANY
NETH.
BELGIUM
LUX.
FRANCE
SWITZ.
AUSTRIA
CZECH
REPUBLIC
SLOVAKIA
HUNGARY
MOLDOVA
ROMANIA
BULGARIA
SERBIA
BOS. &
HERT.
CROATIA
SLOVENIA
ITALY
GREECE
TURKEY
SPAIN
PORTUGAL
UNITED
KINGDOM
IRELAND
ICELAND
GREENLAND
(DENMARK)
Faroe Islands
(DENMARK)
Shetland
Islands
(UK)
Jan Mayen
(NORWAY)
(see inset)
(see inset)
Bay
of
Biscay
60°N
45°N
30°E
15°E
0°
15°W

Figure 5.2

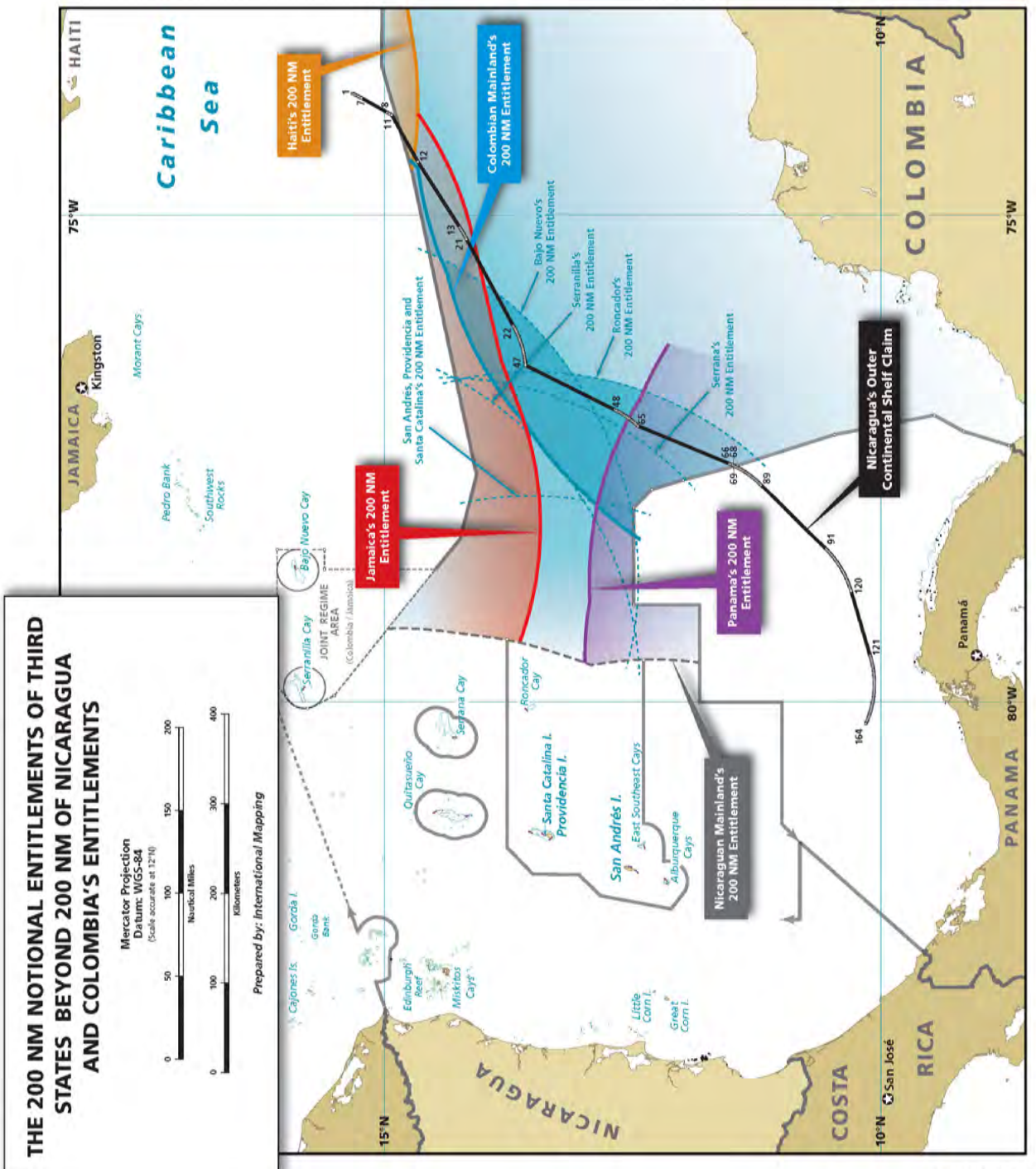

THE 200 NM NOTIONAL ENTITLEMENTS OF THIRD STATES BEYOND 200 NM OF NICARAGUA AND COLOMBIA'S ENTITLEMENTS
Mercator Projection
Datum: WGS-84
(Scale accurate at 12°N)
Nautical Miles
Kilometers
Prepared by: International Mapping
Caribbean Sea
HAITI
JAMAICA
Kingston
Morant Cays
Pedro Bank
Southwest Rocks
Haiti's 200 NM Entitlement
Colombian Mainland's 200 NM Entitlement
Jamaica's 200 NM Entitlement
San Andrés, Providencia and Santa Catalina's 200 NM Entitlement
Bajo Nuevo's 200 NM Entitlement
Serranilla's 200 NM Entitlement
Roncador's 200 NM Entitlement
Serrana's 200 NM Entitlement
Nicaragua's Outer Continental Shelf Claim
Panama's 200 NM Entitlement
Nicaraguan Mainland's 200 NM Entitlement
Bajo Nuevo Cay
Serranilla Cay
JOINT REGIME AREA
(Colombia / Jamaica)
Roncador Cay
Serrana Cay
Quitasueño Cay
Santa Catalina I.
Providencia I.
San Andrés I.
East Southeast Cays
Albuquerque Cays
Cajones Is.
Gorda I.
Gorda Bank
Edinburgh Reef
Miskitos Cays
Little Corn I.
Great Corn I.
NICARAGUA
COSTA RICA
San José
Panamá
PANAMA
COLOMBIA
15°N
10°N
80°W
75°W

Figure 6.1

Figures 7.1 to 7.17 not reproduced